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In This Issue

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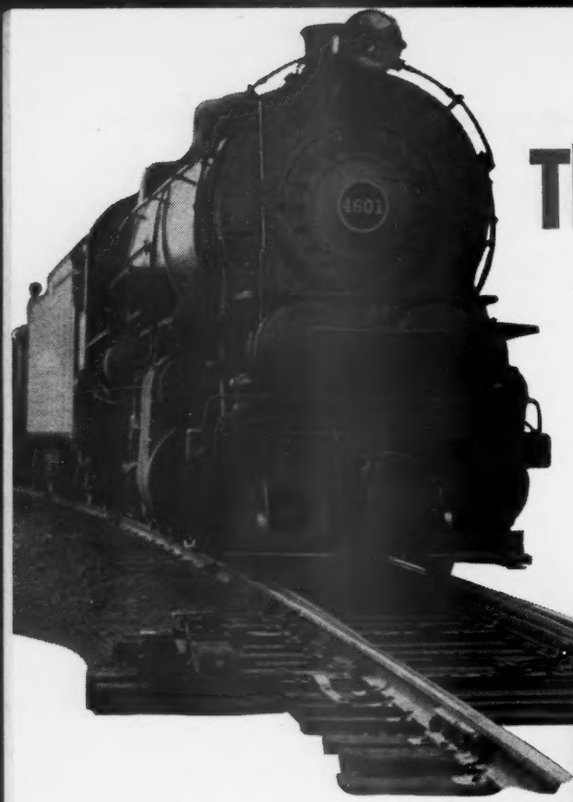


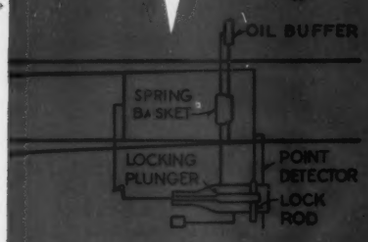
This is what happens...

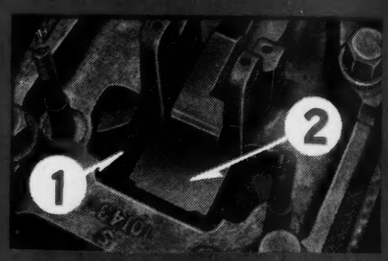
...when a train trails a spring switch equipped with a "Union" Mechanical F.P. Lock!

FOR trailing moves against the closed point, the "Union" Mechanical Facing Point Lock retains all of the advantages of the spring switch.

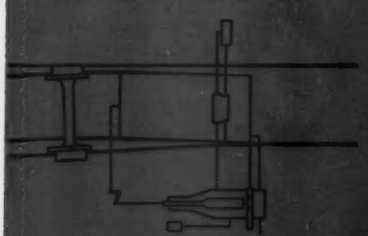
On the other hand, high-speed, facing-point, main-line moves can be permitted safely because the mechanism securely locks the switch points against movement from the impact and vibration caused by a passing train. A built-in circuit controller for signal control checks the positions of the locking plunger and the switch points.

"Union" Mechanical Facing Point Locks have reduced operating costs, decreased train running time and, in some instances, have effected fuel savings sufficient to pay for the costs of the installations in a surprisingly short time.

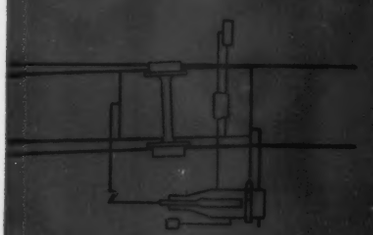


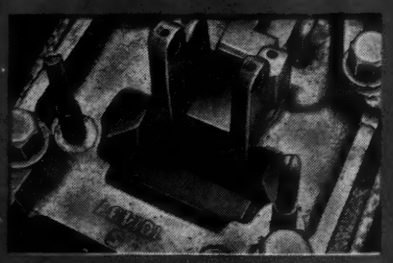


In the normal position of the spring switch, the standard lock rod (1) is locked by the locking plunger (2) of the Mechanical F.P. Lock.



The flexing of the switch points by the leading wheels of the train withdraws automatically the locking plunger from the lock rod before the spring head rod starts to move.





As the train advances, the unlocked points are forced open against the spring action of the switch to permit trailing move . . . and after the train has cleared the switch, the points are returned to normal and locked for subsequent moves.

UNION SWITCH & SIGNAL COMPANY

SWISSVALE PENNSYLVANIA

NEW YORK CHICAGO ST. LOUIS SAN FRANCISCO

The Week at a Glance

THINNING THE GRAVY: The Supreme Court says interstate truckers do more than their share of wearing out roads, so it's fair enough for the states to make them pay some taxes. It's constitutional for a state to make a trucker pay a reasonable fee for using the highways, says the court, and it's constitutional for the state to use the proceeds of the tax as it sees fit. The substance of this interesting decision is summed up in one of this issue's news articles.

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SPENDING TO SAVE: It can be true of freight cars as of many other things that the cheapest one to buy is not the cheapest one to own. In a paper delivered at the recent mechanical engineers' meeting in Atlantic City, A. F. Stuebing of Carnegie-Illinois Steel presented a factual dollars-and-cents comparison of the relative costs of buying and maintaining cars of standard and lightweight structural design. His analysis of these data is the subject of an article in this issue, and they are further commented upon in one of our editorials, particularly as applied to box cars.

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A 24 PER CENT PROFIT: A lightweight welded high-strength-steel hopper car of the type described in this article has a somewhat higher first cost than the standard A. A. R. design in copper steel, one reason being that the load-compensating brake is required. On the other hand, there are operating savings resulting from reduced tare weight and savings in major replacement costs when distributed over the car's life. On an annual basis, it is calculated that the operating saving per car with the lightweight design would be $79.68 as compared to estimated additional fixed charges, resulting from its higher first cost, of $7.07. Put another way, it appears that the additional cost of the lightweight design would be recovered in about four years. The railroad business is not over-rich in situations that offer opportunities to make profits of such magnitude.

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NEW HAVEN WINS: The commission is permitting the New Haven to increase its interstate coach fares again, thereby recognizing that carrier's unusual dependence on revenues from passenger business and its corresponding difficulty in meeting higher costs with the proceeds of higher freight rates alone. At the same time the Western railroads have been allowed to increase first-class fares to the level already prevailing in other parts of the country. Details appear in our news columns.

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ACTION ON LEA REPORT: Vice-President Allison of the Transportation Association of America has outlined the program by which that organization has set about to achieve a resolution of the issues of the transportation problem among the various parties of interest and to produce a statement of the essentials of a new national transportation policy. This carefully planned work, now well under way, was undertaken to crystallize the findings of the so-called national transportation inquiry undertaken by the House interstate commerce committee when it was headed by former Representative Lea. An explanation of the association's procedure appears on page 56.

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WHY ROB PETER—?: There is no doubt that this country needs for its defense an efficient air force equipped with the best planes that can be built. If the plane builders cannot make a living meeting the requirements of the air service, then the government may have to come to that industry's aid with subsidies. But that necessity, if it exists, can be coped with directly. As our leading editorial points out, such direct procedure does not seem, however, to appeal to the aviation enthusiasts, either those in the government or those in the commercial flying business. They want subsidies—about that there is a refreshing unanimity of conviction—but they have a preference for the around-Robin Hood's-barn type of subsidy, such as would go along with air transport of all first-class mail, for example. The trouble with that sort of taxpayer support of industry is that it doesn't simply help the industry that can't stand up alone—it injures some other industry at the same time. In the case of subsidized air mail it is the railroads that are injured, and the railroads are vital to national defense, too, even though their readiness in that respect is rarely regarded as something that has to be thought about. The railroads are supposed to take care of themselves; the bureaucrats have their hands full taking care of the railroads' competitors.

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SEEKING A SYSTEM: The views of one railroad officer on the urgent need for the provision of a *system* to assure the railroads adequate net earnings are set forth in a letter appearing on page 62. Among other ideas, he suggests that the Interstate Commerce Commission might have a "labor department" and through it might participate in wage and rules cases.

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FREIGHT CAR DYNAMICS: It's one of the first principles of the railroad business that a car standing still on the line isn't earning any money. The obvious is stated because the Monon's vice-president Cheshire has this week presented an argument—the subject of a short article in this issue—against frequently holding up the movement of cars for inspections. It is his contention that one thorough inspection of a car before it is loaded—an inspection followed by whatever repairs are called for to make it fully serviceable (not just to get it off the division)—should be sufficient to get that car to its destination, with its load, without delays for any more inspections. Transportation men, he says, have no business to interfere with the movement of a shipper's property; it is their job to keep the shipment moving; whether it must be handled by just one division, or one railroad, or many.

A GOOD PROPHET: Robert R. Young publicly predicted some time ago that the Interstate Commerce Commission would not permit him and C. & O. President Bowman to take places on the New York Central board while retaining their C. & O. and Alleghany Corporation offices. If the commission accepts the recommendations of Assistant Director Boles it will make Mr. Young a true prophet. As indicated in an article herein, the I. C. C. officer considers the Young proposal neither legal nor meritorious. Mr. Young, in commenting on the findings proposed in the report, finds in it a "bureaucrat's two-faced justice," and declares he hasn't given up the fight.

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VETERAN RETIRED: One of the largest train sheds in the country was that at the Pennsylvania's Pittsburgh station, torn down just recently after 45 years of service. Its replacement with modern individual-platform shelters was decided upon not only because it was outmoded and too short to accommodate postwar trains but also because it was showing signs of structural deterioration which might soon have required rebuilding extensive enough to make its retention an expensive luxury, and because its location prevented desirable rearrangements of the station tracks to provide roomier platforms and a better alinement for heavy trains. The demolition had to be carried on without interfering with traffic and without endangering customers and employees. How this was done is reported in this issue (page 46).

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RETURN = 3.56 PER CENT: In the 12 months ended with October the Class I railroads reported a return equivalent to 3.56 per cent on the investment, as compared to 2.8 per cent in the 12 months ended with October, 1946. (The news pages give the data in detail.) Of course conditions in 1946 were unusually disturbed by strikes and by the Interstate Commerce Commission's dilatory disposition of the freight rate case (Ex Parte 162), and the result was that the railroads then went into November with only $162 million profit to show for 10 months' capacity business. This year on the same date they had made over twice as much, or $364 million. Not enough to restore the industry's shaky credit, to be sure, but a change in the right direction. In the light of this encouraging trend, and of the commission's recognition of its duty to guard the industry's good health—a duty clearly acknowledged in the report authorizing the recent so-called 10 per cent interim rate advance—the railroads will be better set to buy what they need to operate more efficiently.

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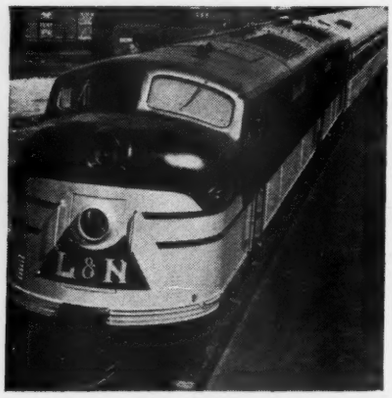
$200 MILLION A MONTH: The railroads' purchases of manufactured products, including equipment orders, were 14 per cent greater in September than in August. While outlays for materials and supplies were, in general, down in September, when the effect on revenues of the non-op wage increase was looming large, much larger orders were placed for equipment. Data on purchases and inventories appear on page 59.

THE OKONITE NAME MEANS LONG SERVICE LIFE

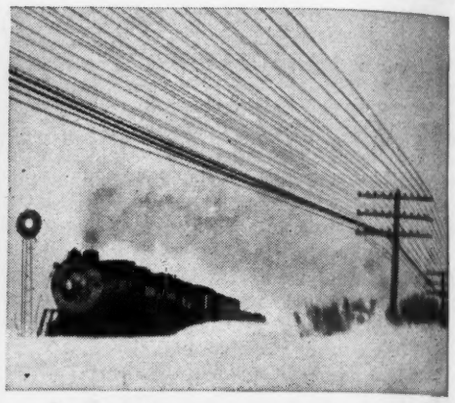
. . . with CAR WIRING

Okonite-engineered car wire is proved on the job. Millions of feet of it are in use today, serving lighting, power and air conditioning systems.



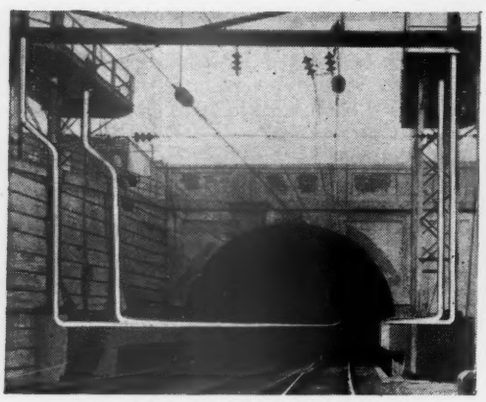
. . . with LOCOMOTIVE WIRING

Okonite makes dependable cable for generator leads, jumpers, lighting systems, headlight wiring, on controllers and for cab signal wiring.



. . . in CENTRALIZED TRAFFIC CONTROL

Okonite cables made particularly for C.T.C. service have survived storms and floods, operating while submerged in snow and water. Prevent leakage at insulators. Electrically stable.



. . . in RAILROAD ELECTRIFICATION

The Oilostatic Electric Transmission System, an Okonite-Callender development, supplies high voltage power for electrification. Cables are under pressure in oil-filled pipe line.

. . . with TOWER and CASE WIRE

Okonite-Okoprene Tower and Case Wire is service-proved and tested for flame resistance, distortion resistance and dielectric strength when submerged.

. . . with SIGNAL CABLES

Photograph shows control tower in installation where cables made by Okonite serve an interlocking that combines remote and automatic control.

. . . in INTERLOCKINGS

Photograph shows multi-conductor Okonite Parkway cable serving an interlocking. It is being reeled from a flat car directly into a trench.

. . . with YARD WIRING

Okonite-engineered high voltage power cables serve underground and in risers to lighting towers in the yard shown in the photograph above. Here floodlighting helps speed traffic.

WHICH WIRES AND CABLES DO YOU NEED?

Further details on dependable Okonite wires and cables for any of the railroad services shown in this series of pictures (or other railroad uses) are yours for the writing to The Okonite Company, Passaic, N. J.

B208

OKONITE OKONITE SINCE 1878 **insulated wires and cables**

RAILWAY AGE

Aiding the Air Lines by Injuring the Railroads

The President has at work an "Air Policy Commission," composed of distinguished civilians whose assignment is to study the actual situation of the nation's air defenses and to recommend government policies necessary to assure the adequacy of this vital military arm. This commission is receiving a lot of volunteer assistance from people in the domestic air transport business—who seem quite willing to relieve the members of the commission of practically all the observation, the thinking, and the deciding which the President has assigned to them. One of these volunteers is Captain Eddie Rickenbacker, president of the Eastern Air Lines.

Subsidizing by Indirection

No one would question Captain Rickenbacker's courageous patriotism, nor his competence to speak with some authority on the physical aspects of air defense. He does not, however, limit himself to the field of his competence by giving advice only on the physical needs of research and plane manufacturing capacity, but proceeds to urge a specific method of political financing of plane development and production. Writing in the Hearst papers, he says in part:

"Sending first class mail by air, where time saving can be effected, and tying parcel post into air transportation, would greatly increase the volume of air traffic—would improve the economic status of the air lines and thereby would not only stimulate commerce and industry and advance the general culture of our country, but would substantially strengthen the civil aviation factor of our national defense."

Captain Rickenbacker goes on to explain that, for military reasons, the country needs a large plane-manufacturing capacity and a large personnel trained in all phases of aviation—assertions which no one would challenge. But he also contends that a desirable and effective means of assuring adequate military aviation resources is to increase greatly the cost of postal service in order to foster an uneconomic and lopsided development of commercial aviation. He needs to be reminded—and so do all those who are inclined to look upon him as something of an oracle—that a proposal that government funds be used to divert economic activities from their normal and natural channels involves questions far more complex and difficult than the physical adequacy of military aviation facilities. It involves problems of political philosophy and transportation economics, in the consideration of which Captain Rickenbacker's opinion is entitled to no more weight than that of any other layman—and a layman who has a large axe to grind, at that.

The fact is that the defense of the country requires the maintenance of an adequate, efficient and dependable railroad plant—quite as urgently as it does a large and progressive plane-manufacturing industry. Indeed, plane manufacture itself cannot go forward without efficient railroads to serve it. Moreover, not just the defense of the country, but also the feeding, the clothing, and the provision of shelter for the population being defended, are dependent upon the continued functioning of the railroads. The railroads have no subsidies or other political revenues to aid them. The only resources they have from which to keep their plant modern and in readiness for emergencies are the revenues received from the movement of traffic. Captain Rickenbacker proposes to strengthen the country's air defense by weakening the financial sinews of its basic transportation, the railroad industry.

Far-Reaching Consequences

The revenue derived by the railroads from the transportation of mail is about $130 million annually. The arbitrary diversion of a substantial part of this traffic to the air lines, as proposed by Captain Rickenbacker, would not, it is true, seem large in comparison with total railway revenues—but the loss of such revenue would, nevertheless, be sufficient to put hopelessly into the "red" many passenger trains which now carry mail. The railroads would be forced to discontinue the

operation of such trains—and, when they did so, their revenue from the transportation of passengers would also largely decline. Conversely, the accession of a large amount of mail traffic to the air lines—at a cost to the government many times larger, incidentally, than that of rail transportation of the same traffic—would enable the air lines to operate many more schedules for the transportation of passengers than present traffic will sustain.

It follows that the arbitrary diversion of mail traffic from the rails to the air, as Captain Rickenbacker proposes, would, in the end, cost the railroads far more in lost revenues—and hence in their ability to keep their plant modern and adequate to all demand—than the dollars-and-cents loss represented by the diverted mail traffic alone.

Taking the Railroads for Granted

The military authorities appear to do little if any more worrying about the supply of railroad transportation in the event of an emergency than they do about the supply of air or water. Railroad facilities in sufficient quantity have, so far, been made available entirely by private initiative without the necessity for concern on the part of the military planners. But private initiative has done this job successfully heretofore only because, up until comparatively recent years, there did not exist the present enormous political expenditures (for highways, waterways, and air transport facilities) which are now the dominant factor in transport plant expansion. There is not the space to present the evidence here—but it could be readily supplied—which would conclusively demonstrate that this forced feeding from the public till of rival agencies of transportation cannot proceed much further than it has without wrecking the railroads, either physically or as self-sustained private enterprise.

Captain Rickenbacker's proposal to divert a large share of mail traffic from the railroads to the air lines is just another bundle of socialistic straw for the overburdened back of the railroad camel—that part of the transportation industry which is still trying to survive without aid from the public treasury.

If plane manufacture is a business which cannot thrive to the degree required for national defense without government assistance, then let's be forthright and subsidize this industry directly—and not resort to the subterfuge of requiring the Post Office Department to subsidize it by the use of an uneconomic agency for the movement of mail. Let's not forget, either, that the railroads have to be kept in readiness so that, in time of crisis, they will be prepared to take over the civilian traffic which the air lines cannot then handle. If the railroads do not have sufficient revenues from the movement of peacetime traffic to provide and maintain such "stand-by" capacity, then railroad service, also, will have to be subsidized. If the federal government does not face the facts straightforwardly and do its aviation subsidizing directly on military planes where much help is needed—and, instead, seeks to subsidize by indirection through the postal service—then it will likely find itself paying a half-dozen subsidies instead of only one. At the same time, it will risk the complete socialization of the transportation industry.

How Weight Reduction Can Be Profitable

In his paper at the annual meeting of the American Society of Mechanical Engineers on the application of high-strength steel in freight cars, which appears elsewhere in this issue, A. F. Stuebing, assistant manager of sales, High-Strength-Steel Division, Carnegie-Illinois Steel Corporation, said that, in a general way, "the application of high-strength steels in hopper cars is likely to effect the greatest economy when the weight of the body is reduced considerably."

This is also evident in the case of box cars, in connection with which Mr. Stuebing took no credit for operating savings effected by the increase in lading capacity within a given total gross weight at the rail, which reduces the number of cars required for a given volume of traffic in cases where cars are loaded to capacity. He confined his estimate of operating savings to the reduction in gross ton-miles resulting from the reduced tare weight.

As an illustration of the method set forth in his paper as it applies to box cars, Mr. Stuebing assumed a relatively small weight reduction of 1.15 tons for a 23-ton box car of conventional design built of copper steel. For the high-strength steel of the body of the lighter car he estimated an increase in the price of the car of $75. The net annual reduction in costs, including operating and maintenance savings and the effect of the increased fixed charges, was estimated as $17.95, a net return on the additional cost of the car of 23.9 per cent.

A further weight reduction upward of a ton and a half would bring the ratio of tare weight to gross weight within the range requiring a variable load brake. The additional weight reduction might reduce the differential cost of the car before the brake, which would add, according to the author's estimate for the load compensating brake, $270 to the first cost. This would probably effect some increase in the annual saving in maintenance and in operating expenses, but would also increase fixed charges.

If the design produced a weight reduction of, say, 2½ tons, requiring the addition of the differential cost of the brake to the first cost of the car, and assuming no change in further weight reduction on maintenance expense, the net return on the additional investment, including the differential cost of the brake, would be less than five per cent.

If as much as five tons of weight were saved, the return on the investment would be stepped up to approximately 17 per cent. What actual effect the further reduction in weight would have on the annual maintenance cost per car is difficult to estimate. It would depend in large measure on the character of the car structure; it might be the same, or higher if the design were not particularly well balanced.

These estimates illustrate the fact that once the additional first cost required to install a variable-load brake on the car has been decided upon, the best return on the investment increment thereby incurred will be attained when the greatest feasible weight reduction has been effected. This is of particular importance in the case of box cars where conservatism suggests that no

credit be taken for the possible increase in lading for a portion of the service rendered by the car. Without this credit the rate of return for weight reductions low in the range requiring a variable-load brake is likely to be low.

Off-Track Units Speed Clearing of Derailments

It has been found in recent years that off-track equipment of various types, used as an adjunct to conventional wrecking cranes, can be a valuable aid in accelerating the clearing of the tracks and in reconstructing them after destructive train accidents. With track-mounted cranes working from one or both ends of a track obstruction, the off-track equipment—including such machines as crawler bulldozers equipped with winches or crane booms, and even truck-mounted cranes—is put into operation at intermediate points, beyond the reach of the wrecking cranes. In this way the time required to reopen the line to traffic can frequently be reduced by many hours.

Few roads have used off-track machines systematically in clearing wrecks, however. More often their use at derailments has been more of an on-the-spot improvisation on the part of local officers, hastily drafting whatever of such equipment was available.

Such improvisation is commendable. Systematic planning for the use of such equipment before the accidents occur would be more fruitful. When such things are left to chance, it may easily happen that no suitable machine for the job to be done may be available without the loss of valuable time.

At least one large road is now using off-track equipment at derailments in accordance with a carefully-thought-out scheme designed to minimize the time required to get the equipment to the site of the emergency. This plan is based on equipment provided especially for use at derailments and for track stabilization (ditching, bank widening, etc.). Machines used include crawler bulldozers equipped with winches and truck-mounted cranes. Truck tractors and trailers are provided for the bulldozers so that they can be transported quickly by highway. Stationed at strategic points, this equipment is subject to call at all times, and at the end of each day machines are loaded on the trailers in readiness for immediate movement.

To assure that no time will be lost in getting the equipment into action, special maps have been drawn for the use of the operators to show the shortest and best highway routes to various points along the line. Indicated on the maps are points where the equipment will be joined by a "pilot," usually a local representative of the maintenance-of-way department, who directs the movement to the actual site of the trouble.

Such a systematic plan does not preclude the use of any suitable off-track machines immediately available; it assures reasonable availability everywhere. Since this equipment has demonstrated its usefulness, it needs to be given maximum effectiveness, which can be provided only by a systematic program.

Technology and Humanics

For five full days last week at Atlantic City the many divisions of the American Society of Mechanical Engineers met to discuss their peculiar problems. Based on carefully developed and tested techniques, the presentations and discussions of the papers and addresses were made as forceful and effective as possible.

Seldom in the mornings and afternoons were as few as four sessions scheduled at the same time; indeed, with the considerable number of meeting rooms available in the two adjacent headquarters hotels, as many as ten sessions were conducted on one occasion at the same time. The Railroad Division held five sessions, at which nineteen papers were presented, covering a wide variety of problems involved in the design, construction and maintenance of cars and locomotives.

The seventy-four sessions of the meeting, as a whole, were filled to the brim with highly technical material and, yet, here and there, and sometimes in unexpected places, the human element was recognized as an important factor, deserving special consideration in engineering and industrial operations.

One phase of these human relations problems came to the fore in several instances; that was the necessity of giving more attention to, and devising ways and means of encouraging and developing, the young men in engineering and industry. It was recognized that much could be lost, both by industry and the young men themselves, if more consideration were not given to their needs.

On at least one occasion, also, the younger men voiced the opinion that they sorely need the advice and counsel of the older and more experienced members; moreover, they covet the opportunity to take on larger responsibilities and a more active part in the society's affairs. It means much to them through making the acquaintance of more experienced engineers, or engineers engaged in other types of work, and gives them a splendid opportunity to broaden their horizons and develop their abilities.

Do we not find here a suggestion for our various railway associations, regardless of the department or activity with which they are associated? Will it not be an important factor in the growth and development of the younger men, if they are encouraged to attend the meetings of such organizations and take part in them? Cannot some of them give a good account of themselves in working on committees or in taking over other special tasks? The A.S.M.E., for instance, has made it a practice to have a junior member assigned to sit in on each one of its standing committees. This has not only proved a good training experience for the young men and prepared them for larger responsibilities and more active work in the society, but it has been a real asset to them in meeting and becoming acquainted with the leaders in their profession.

With other industries actively seeking young men, cannot the railroads profit greatly by giving more attention and study to the young men in their employ, and by deliberately planning to make a larger and more effective use of their potentialities?

One of the stiff-leg derricks on the traveler lowering two sections of the roof decking into gondolas spotted on Track 18, just south of the train shed

Large steel structure at Pennsylvania station, Pittsburgh, Pa., is dismantled quickly and safely and with minimum interruption to traffic as part of a major program of improvements to the station facilities

Famous Train Shed Comes Down

THE 45-year-old balloon-type train shed at the station of the Pennsylvania at Pittsburgh, Pa.—one of the largest such structures still remaining in the country—was recently dismantled as part of a general program of improvements to the road's passenger-station facilities at that point. This work, which was done under traffic, involved the handling of 2,318 tons of structural steel and approximately 200,000 sq. ft. of roof sheathing and other roofing material. Removal of the train shed clears the way for rearranging the tracks of the station to provide wider intermediate platforms and, at the same time, for relocating certain tracks along the north side of the station to obtain an improved alinement in the approach to the station from the northwest.

Stub and Through Tracks

Removal of the train shed was accomplished with the aid of a large traveling scaffold, mounted on specially-designed trucks operating on two widely-separated tracks in the train shed. This scaffold, or traveler, extended across all of the tracks in the shed and supported two stiff-leg derricks for handling the old steelwork as it was removed. In addition, it served as a support for each section of the structure while it was being razed and as a protective shelter against falling objects. Working in advance of the razing work, railroad carpenter forces erected temporary canopies of the butterfly type over the island platforms in the station, which are to remain in service until permanent shelters are constructed later.

The Pittsburgh station, involving a combination of the stub and through track arrangements, was completed in 1903. The head house is a 14-story structure of brick and steel construction, 225 ft. by 137 ft. in plan, with its long dimension in a generally east-west direction. It contains the ticket offices, waiting room and other station facilities and also houses the general offices of the road's Central region. Adjoining the station building at its east end is a one-story train concourse, 60 ft. by 166 ft., extending across the full width of the station building. East of the concourse, and separated from it by a curtain wall containing the train gates, are the station tracks, formerly covered by the train shed. The station tracks are numbered 2 to 20, inclusive, from north to south. Of these, Tracks 2, 3, 4, 5 and 6, on the north side, and Tracks 15, 16, 17, 18, 19 and 20, on the south side, are through tracks, the former group leading westward to Chicago and the latter to St. Louis. Between these through tracks are eight stub tracks, used primarily for trains operating only between Pittsburgh and the East.

A Large Structure

The old train shed, a three-hinged arch of steel construction, 90 ft. high and 553 ft. 6 in. long, extended across Tracks 4 to 17, inclusive, the total span being 254 ft. 8⅜ in. The roof of the shed was supported on 24 steel arches, arranged in pairs on 9-ft. centers, with

49 ft. 6 in. between the centers of adjacent pairs. The roof covering, of composition material, was laid over 2-in. timber sheathing supported on 3-in. by 12-in. purlins. Transverse louvers for removing locomotive exhaust gases extended across the structure directly over each pair of arches, and similar louvers were located midway between adjacent pairs, these being supported on intermediate framing.

Original Construction

In the original construction, a longitudinal monitor extended along the center line of the shed for its full length, but this was later removed and the opening was covered with roofing. The sides of the train shed were vertical to a height of 35 ft. and originally were composed of panels of copper, or glass with copper louvers; these were removed later and replaced with wood sheathing or asbestos shingles.

The arches supporting the shed were carried on concrete foundations, with the footings on opposite sides being joined by a series of steel I-beams extending transversely beneath the tracks. Later, when excessive deterioration of these connecting members was noted, they were replaced by heavy tie rods. One end of the arched superstructure was free to move, but it is of interest to note that periodic inspection of the structure over its 45-year span of life failed to reveal any movement of the free end.

Lay-out's Disadvantages

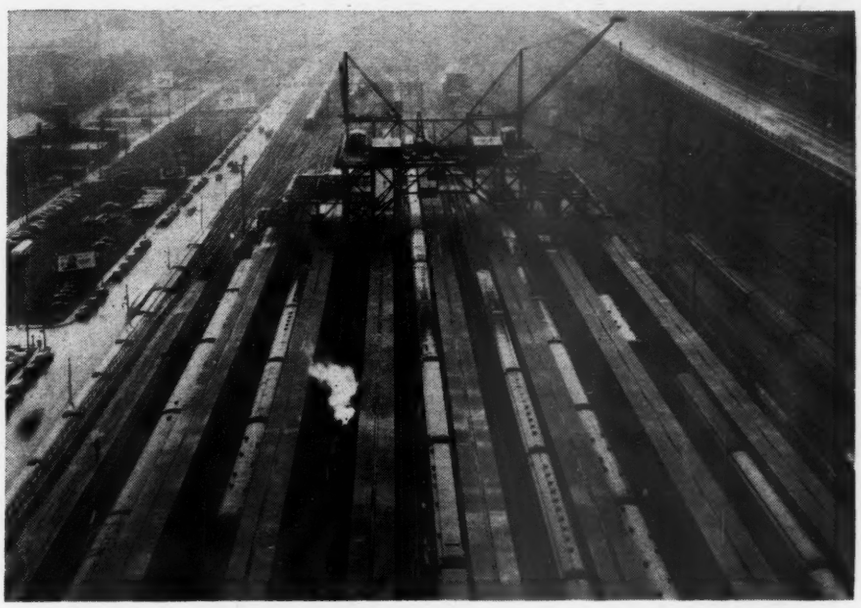
As already pointed out, Tracks 2 to 6, located along the north side of the station layout, are through tracks. These converge, just west of the concourse, into two tracks and immediately enter a 13-deg. curve to the north on an elevated structure on which the grade is 0.80 per cent ascending westward. This arrangement makes it difficult to start the heavier trains and not infrequently they require help in leaving the station. The construction of a new elevated structure on an improved alinement has long been contemplated, but the presence of the train shed, with one line of supports located between Tracks 3 and 4, prevented the shifting of tracks to conform with this plan.

The presence of the train shed was also objectionable for other reasons. Its length of 553½ ft., although adequate in 1903, was much too short for trains being operated today. In fact, it became necessary to extend the platforms beyond the east end of the structure many years ago, butterfly canopies being erected over the extensions. In addition, the platforms, scarcely 13 ft. wide, were too narrow to accommodate any considerable number of passengers, together with trucks of luggage, mail and express, and one of the next steps. in the improvement program will be the respacing of tracks, with two tracks eliminated, to permit wider platforms to be constructed. Another disadvantage lay in the fact that driving rains from the east penetrated the shed for a considerable distance, to the discomfort of patrons.

Perhaps the most objectionable feature of the old train shed was its heavy maintenance cost. Frequent inspection of the steelwork and of the roof was necessary and large sums were expended each year to make repairs. Until a year ago all trains using the station were steam powered.

Feared Deterioration

Since the steelwork of the structure had been subject to the corrosive gases from thousands of locomotives over a period of 45 years, it was



Above—Looking east over the train-shed area after the completion of the work, showing the temporary platform shelters in place. The traveler has been moved to the east end of the area and is being dismantled. Below—Donkey engines for operating the stiff-leg derricks, and other equipment used in dismantling the train shed, were mounted on the top working platform of the traveler under the shed

One of the four trucks, each rated at 100,000 lb. capacity, on which the traveler rested. Note cross beam, for transmitting part of the load to the track rails

feared that progressive deterioration from this cause would necessitate the renewal of many of its steel members within a few years.

Accordingly, to clear the way for carrying out a program of improvements involving the Pittsburgh terminal, including the station, in the interest of better service and greater convenience, and to eliminate the heavy maintenance costs involved in keeping the old train shed in repair, it was decided to remove the structure.

Traveling Scaffold

It was necessary that the work of dismantling the train shed be done with the minimum of interference with the traffic passing through the station and without danger to the traveling public. To meet these requirements a structural-steel traveling framework, or scaffold, was devised and erected to serve the quadruple purpose of (1) providing an elevated platform for men engaged in the dismantling work, (2) supporting each arch of the structure, in turn, as sections of it were removed, (3) affording a support for the two derricks to be used in handling the scrap steel and other material into gondola cars for removal, and (4) serving as a shelter to prevent objects from falling to the tracks and platform level.

This structure, hereafter referred to as the traveler, was supported on four special trucks moving on Tracks 7 and 14, there being two trucks on each track. The central portion of the traveler—spanning the area between Tracks 7 and 14—was constructed in the form of a truss span and supported a level platform, 70 ft. by 116½ ft., at a height of 64 ft. above the track level. Flanking this structure on each side were two cantilever sections. Each of these supported two working platforms, one of which—32½ ft. by 70 ft.—was at a height of 45 ft. above track level, while the other—16½ ft. by 56½ ft.—was somewhat lower, being 28 ft. above the ground. Two stiff-leg derricks, each with a 90-ft. boom, were erected on the rear legs of the traveler, which extended higher than the highest platform to permit use of the booms at maximum radius over the train shed.

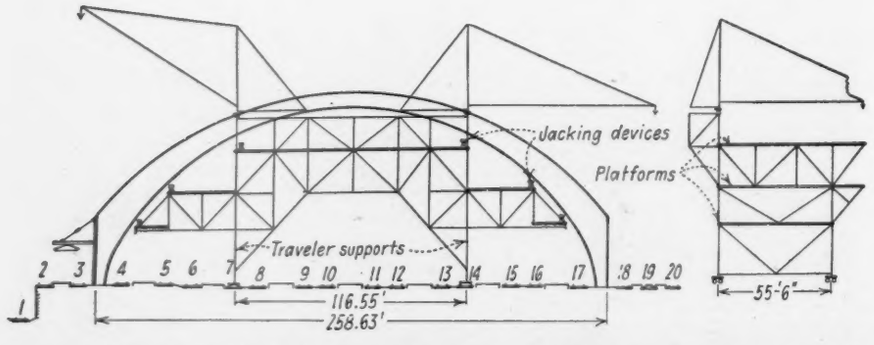
Jacking Stations

Important parts of the traveler were twelve jacking stations installed on the various working platforms to transfer the weight of the arches to the traveler while they were being dismantled. Constructed as part of the steel framing of the traveler, these jacking stations were provided in pairs, i.e., a pair of such stations was located near the outer edge of all working platforms. The two jacking stations comprising each pair were spaced 49 ft. 6 in. apart, measured longitudinally with the train shed, this being equivalent to the spacing of the pairs of arches supporting the train shed. At each jacking station there were two jacking points placed 9 ft. apart, the same as the distance between the arches comprising each pair. Each of these points provided the base for a hydraulic jack. During the dismantling process, a jacking shoe was welded to the lower chord of each arch, at the location of each jacking point. Excess clearance between the shoes and the jacks was taken up by means of steel shims.

The trucks on which the traveler was supported were of heavy construction, each of them being rated at 100 tons capacity. These truck supports occupied Tracks 7 and 14 during the entire procedure. Each of the trucks embodied two pairs of flanged wheels within a steel framework. A pair of beams beneath the trucks extended beyond each end. Cross members were attached to these beams in such a manner that they cleared the rails by only about one inch. With this construction the load on each truck was distributed to the track at eight points—four of these being the truck wheels, while the other four support points were obtained by shimming between the cross beams and the rails.

The Dismantling Work

Using two 60-ton locomotive cranes, each with a 120-ft. boom, the traveler and the two stiff-leg derricks were erected in an open location east of the shed. When completed the traveler was moved to the east end of the train shed and, when a steel facade at that end of the structure had been removed, the traveler was moved a short distance into the shed and the jacks on the top platform level were raised to contact jacking shoes welded to the first pair of arches. The roof and the intermediate framing between this pair of arches and the next adjacent pair were then re-



Cross-section of the train shed, looking east, showing the arrangement of the traveler, the jacking points and the derricks with respect to the train shed and the station tracks. Shown at the right is a side view of the traveler

moved, being loaded by the two derricks into cars spotted on Tracks 3 and 18. Next, the arches comprising the first pair were cut near the center line, using oxy-acetylene torches, and sections of these arches, cut to suitable lengths for handling, were lifted out by the derricks and loaded into cars.

When the center sections of the first pair of arches had been removed, the jacks on the next lower platform were brought into contact with the arches to support them until the dismantling reached these points. Finally, the jacks on the lowest platform level of the traveler were used to support the arches, until the portion remaining could stand alone.

This procedure was followed successively, for each pair of arches, until the west end of the train shed was reached. Here, because it was feared that the last pair of arches would not stand alone, the jacks on each platform were used to support the last two pairs of arches simultaneously while they were dismantled.

Fire and Safety Measures

Because of the danger of fire from sparks or hot metal falling on the traveler platform or onto the roofs of cars at the ground level, a fire marshal was kept at hand with water lines in readiness at all times during the course of the work. One hose line, attached to an existing water line at the crown of the train shed, was placed on the highest platform of the traveler, while two others were connected to fire plugs on each side of the shed at the ground level and kept ready for use on the traveler.

Because of the constant movement of trains and passengers through the station, great care was taken to avoid accidents. A representative of the movement office of the Pittsburgh division, which controls train movements in the station, was on the scene at all times during working hours. He maintained close contact with the train director in charge of station movements and was equipped with a loud-speaker system to warn the workmen of the approach of trains.

Tracks 3 and 18 were made available for the loading of steel between the hours of 10:00 a. m. and 4:00 p. m. daily.

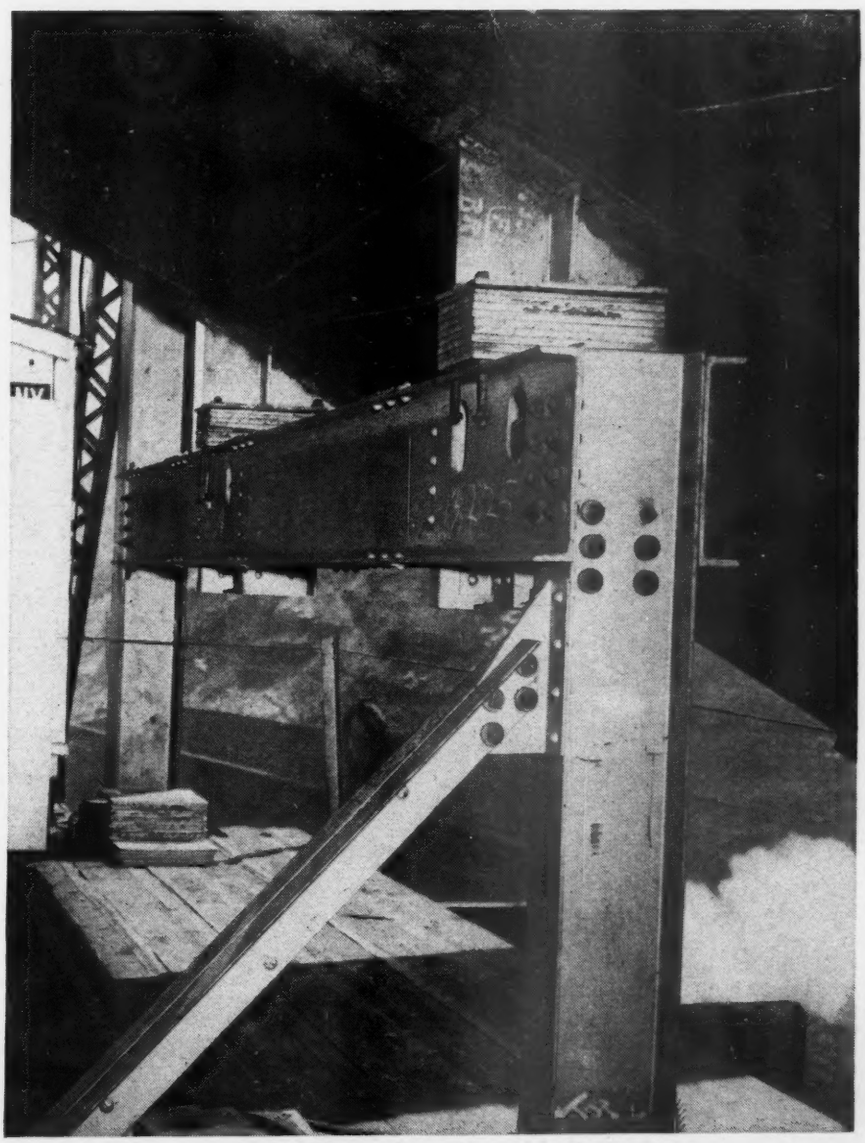
Work before 10.00 a. m. and after 4:00 p. m. was confined to sawing roof sheathing into panels for removal, burning the secondary steel members prior to removal, and cutting some of the longer truss members, which previously had been placed on the working platforms, to suitable sizes for loading into cars. Flagmen were assigned to prevent the movement of any trains while a lift of steel was being handled. As a result of these measures the work was done without injury to any employees or passengers.

Temporary Shelters

While the contractor's forces were engaged in dismantling the train shed, the railroad's division carpenter forces were erecting temporary platform shelters of the butterfly type on each platform, keeping ahead of the dismantling work. These canopies are of timber construtution with roofs of corrugated aluminum. To dispose of rain water the shelters are constructed with timber gutters on the center lines, which are lined with roofing paper. These are sloped to downspouts at intervals along the platforms, leading to a newly-installed system of storm sewers below track level.

As pointed out earlier, the tracks on the north side of the station converge just west of the train-shed area, with consequent narrowing of the platforms between them. For this reason, it was considered impractical to erect the butterfly type of canopy on the platforms in this area. Instead, the canopies at this point are hung from a steel framework supported on posts located in the space between Tracks 3 and 4. Eventually, when the platforms are widened, the butterfly shelters will be removed and replaced by permanent canopies.

The work of erecting and dismantling the traveler and of removing the train shed was performed by the American Bridge Company, Pittsburgh, Pa. The dismantling of the train shed was begun in May, 1947, and was completed, with the traveler dismantled, and all of the temporary platform shelters in place, shortly after November 1.



One of the jacking points on the traveler, showing the special jacking shoes welded to the bottom chords of the arches. The excess clearance between the jacking beams and the shoes was taken up by means of shims. The jacks are located between the horizontal channel members, directly beneath each of the jacking shoes

Economics of Lightweight Freight Cars

Three high-strength-steel hopper cars, a gondola, and a box car compared with base designs—Effects on operating costs, maintenance and fixed charges are appraised*

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THE determination of the most economical construction for freight cars involves a proper balance between the factors of first cost, depreciation, maintenance, and operating expenses, to produce the minimum overall cost. It is evident that, if designers were permitted to disregard weight or to use any available material irrespective of first cost, they could produce a car of such construction that its maintenance cost would be exceptionally low. However, it is unlikely that such a car would be economical because the higher fixed charges and operating cost would probably more than offset the savings effected in repairs.

It would be equally shortsighted to overemphasize low first cost at the expense of greatly increased maintenance and depreciation expense. Similarly, if special attention is directed to any other single item of expense, that one item may be reduced, but others are likely to be increased. In any discussion of the savings that can be effected by reducing the weight of freight cars, due consideration should, therefore, be given to the effect which the proposed change will have on all items of railroad expenses.

The basic reason for the present interest in reduction of weight of freight equipment is that materials have now been available for twelve years—long enough to have removed them from the category of new or experimental materials, and which, either on the basis of unit weight or unit cost, provide greater strength and longer life than could be obtained from materials previously available. These materials are quite generally known as high-strength–low-alloy steels, or simply as the high-strength steels. The term, high-strength steel, has often been applied rather loosely to materials of varying compositions and properties. In this paper, the term will be used only to apply to those established, proved compositions which have mechanical properties substantially superior to those of plain carbon structural steel or copper steel and resistance to atmospheric corrosion two to three times that of copper steel. More complete details regarding properties will be found in Table I.

Table I—Properties of High-Strength Steel

	½ in. and under in thickness	Over ½ in. to 1 in., incl.	Over 1 in. to 2 in., incl.
Yield point, lb. per sq. in.; min.*	50,000	47,000	45,000
Tensile strength, lb. per sq. in.; min.*	70,000	67,000	65,000
Per cent elongation, min., in 2 in.**	22***	.....	22
Per cent elongation, min., in 8 in.** 9/16 in. and heavier	1,500,000	1,500,000	1,500,000
Cold bend**	T.S. 180 deg., D = 1t	T.S. 180 deg., D = 2t	T.S. 180 deg., D = 3t

* For all products other than sheet and strip, the minimum yield point and tensile strength requirements will be reduced by 5,000 lb. per sq. in. when the material is specified in the annealed or normalized conditions.

** A.S.T.M. Standard Specimens, minimum number of tests and ductility modifications apply.

*** For material lighter than 18 gauge, the per cent elongation in 2 in. is 20 per cent minimum.

Reisstance to atmospheric corrosion	4 to 6 times carbon steel
Compressive strength, lb. per sq. in.	Equal to tensile strength at the same strain
Ultimate shearing strength, lb. per sq. in.	Equal to ¾ tensile strength
Modulus of elasticity, lb. per sq. in.	28,000,000 to 30,000,000
Endurance limit, (normalized), lb. per sq. in.	45,000
Charpy impact, keyhole notch, (as rolled, average at room temperature), ft.-lb.	40

Some of the factors necessary to provide a reasonably satisfactory analysis of the economic problem associated with lightweight freight cars have only recently become available. Since 1934, these steels have been used in diversified designs of many types of cars operating under widely varying conditions. In many cases, the actual service life can now be determined or estimated with reasonable accuracy.

The savings effected by reduction in the weight of freight cars and increase in capacity have been estimated by various methods prepared by individual railroads and committees. While the results show substantial differences, the variations are not unreasonable considering the wide range of conditions and the complexity of the problem. Each type of car and each railroad involves different conditions; furthermore, some questions that should be settled to make a definite and accurate estimate cannot be answered by the data available from standard operating statistics. In view of the fact that authorities show general agreement regarding principles and methods of analysis, it would seem that investigation of conditions which are representative of numerous large railroads will indicate what can be expected from various applications of high-strength steel.

Various options are available for designers of high-strength-steel freight-car bodies, with varying effects upon the elements of expense. Designers may choose to use the material in the same sections that are employed in cars of carbon steel with the object of reducing maintenance costs, or they may lighten the weight of the body and increase its capacity to save in the expenses of conducting transportation. Furthermore, the designer can choose between a riveted body or welded construction.

Relative Costs of Hoppers

As a means of illustrating the comparative expenses that may be expected to result from varying types of freight-car construction, estimates have been prepared for cars with bodies of conventional construction using copper steel and alternative designs using high-strength steel. The types analyzed are hopper cars, gondola cars, and box cars.

To determine the relative costs that should result from the application of high-strength corrosion-resisting steel in hopper cars, calculations have been made for four different proposed designs, all on 5½-in. by 10-in trucks. The results are shown in Table II.

Car A—This is the Association of American Railroads' 1935 design of 50-

* A paper presented at the Forum on Freight Car Construction during the annual meeting of the American Society of Mechanical Engineers at Atlantic City, N. J., December 1-5, 1947.

ton hopper car built of copper steel. The weight has been taken as the minimum for which the AB brake is permissible according to A. A. R. rules. The estimated price of $3,500 is believed to be representative of the average for such cars ordered during the late months of 1947.

Car B—This car is similar to the A. A. R. car, with copper steel structural members, but has high-strength steel body sheets of the same thickness as used in the A. A. R. design. With this modification there would be no reduction in weight, nor increase in carrying capacity. The cost of the car would be increased about $140 due to the additional cost of the material for the body sheets.

Car C—This is a car in which weight reductions have been made in accordance with a lightweight high-strength-steel body design following the general plan of the A. A. R. hopper-car body. The structural members provide strength equal to the corresponding parts of the A. A. R. standard car of plain or copper steel.

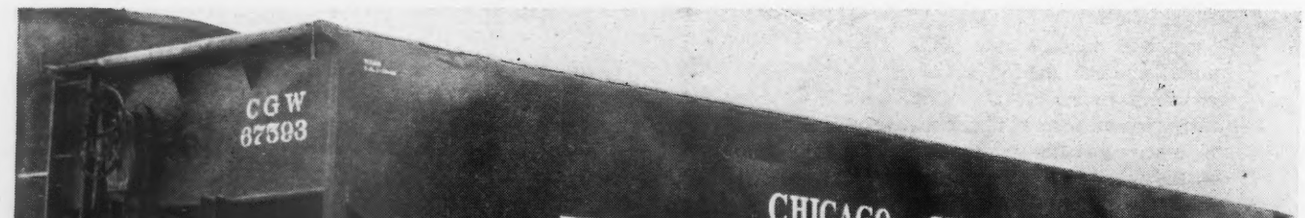
Because of the weight reduction, as compared to the preceding design, the load-compensating brake is required on this car. The available information regarding this braking equipment indicates that it weighs about 150 lb. more than the AB brake and costs about $270 more.

Table II—Relative Costs for 50-Ton Hopper Cars

	A A.A.R. design, copper steel	B A.A.R. Cor-Ten body sheets, no weight reduction	C Lightweight design, high-strength steel, riveted	D R.R.B. design, high-strength steel, welded
1—Lightweight of car, lb.	40,600	40,600	36,000	33,500
2—Maximum load, lb.	128,400	128,400	133,000	135,500
3—Number of cars for same capacity as Car A	1.000	1.000	.9654	.9476
4—Estimated price of car	$3,500	$3,640	$3,829	$3,800
5—Cost for number of cars in Item 3	$3,500	$3,640	$3,696	$3,601
6—Annual saving in operating expenses, excluding car maintenance	Base	Base	$38.27	$59.07
7—Average annual cost of maintenance per car	$120.00	$103.48	$121.50	$104.98
8—Maintenance cost for number of cars in Item 3	$120.00	$103.48	$117.30	$ 99.39
9—Annual saving in maintenance	Base	$ 16.52	$ 2.70	$ 20.61
10—Total annual operating saving	Base	$ 16.52	$ 40.97	$ 79.68
11—Annual fixed charges on Item 5 at 7 per cent	$245.00	$254.80	$258.72	$252.07
12—Net change in fixed charges	Base	+$ 9.80	+$ 13.72	+$ 7.07
13—Net average annual change in cost	Base	-$ 6.72	-$ 27.25	-$ 72.61
14—Net return on additional cost per car, per cent	Base	4.8	8.3	24.2

Car D—This is the lightweight welded high-strength-steel hopper car designed by the U. S. S. Railroad Research Bureau and exhibited in 1946. The structural members are outside the body. The thicknesses of body sheets are graduated, increasing from top to bottom to give approximately equal life throughout. All seams are welded, and laps and ledges are eliminated from the interior of the body. Forming has been largely confined to plain bending. Because of these constructional features, the body should cost no more to fabricate than the A. A. R. standard, if building is done in a shop equipped for welding by machines. The cost of rolled high-strength steel used in the body is approximately the same as the cost of copper steel for the A. A. R. body, as-

Hopper cars of lightweight construction enable a locomotive to produce more revenue ton-miles



One of the five 70-ton lightweight all-welded steel hopper cars, built by Pullman-Standard for the C. G. W. in 1931, which recently completed 15 years of service without major overhauling or heavy repairs

suming that the latter also uses welded rolled-steel construction for center brace and back stop, draft lugs, striker, etc. The load-compensating brake is required on this car.

In the table showing the estimates of relative economies, Items 1 and 2 are self-explanatory. Inasmuch as hopper cars are generally loaded to full capacity, the number of cars required for the same traffic, Item 3, has been taken as inversely proportional to the maximum load.

Savings from Reduced Weight

The estimated prices of the cars, Item 4, have been based on the average for representative conventional 50-ton hopper cars, conforming generally to the conditions outlined for design *A*. The estimates for Cars *B*, *C*, and *D* have been derived from the estimate for Car *A*, with adjustments for differences in costs of material and brake equipment.

In calculating Item 6, data have been taken from a paper by J. P. Morris presented at the annual meeting of the Mechanical Division of the Association of American Railroads, which showed the permissible investment for reduction of tare weight of freight cars for a representative railroad, as calculated by the A. A. R. formula. For hopper cars, the investment per ton of weight saved was $199.20 for steam-locomotive operation and $171.80 for Diesel operation. These values were based on capitalization of the annual savings for 35 years at 6 per cent, which makes the permissible investment 14.488 times the annual saving; hence, the annual savings per ton of weight reduction were $13.75 and $11.86, respectively, an average of $12.80.

These savings were based on the rates of wages and material prices in effect during 1941. The Interstate Commerce Commission's "Monthly Comment on Transportation Statistics" dated June 12, 1947, presented data which showed that wage costs per unit of traffic increased from 1941 to 1947 by 30 per cent. Costs of materials have risen even more. Coal bought by railroads in the first four months of 1947 cost 61 per cent more than in 1941. Therefore, in the tables in this paper, the annual average saving in operating costs effected by reducing the weight of hopper cars by one ton, has been increased by the minimum 30 per cent, over the average for 1941 of $12.80, given above, to make allowance for increases in cost of wages and material in 1947, resulting in an estimated annual saving of $16.64 per ton of weight reduction.

Cost of Maintenance

The maintenance cost for the conventional hopper car has been taken as $120 per year, based on information obtained from several railroads that have large ownership of hopper cars. It has been assumed that the cost of inspection, running repairs and miscellaneous light repairs will be the same for all the cars under consideration. As a basis for estimating heavy repairs, it has been assumed that the bottom sheets of the conventional copper-steel car will need to be replaced after twelve years and again after twenty-four years, at a cost of $400, and the sides will need replacement after 18 years, at a cost of $375. The cost of maintaining body sheets would, therefore, be $33.33 per year for bottoms, and $20.83 for sides anl ends, a total of $54.16.

The high-strength steel sheets in Car *B* can be expected to give 20 years' service in bottoms. The material cost would be $73.83 more than for copper steel, making the total cost of replacement $473.83, or $23.69 per year for anticipated twenty-year life. For the sides, additional steel cost would be $43.44, replacement totaling $418.44. At a life of thirty years, this gives an annual cost of $13.95. The total assumed cost of major replacements would be $37.64, or $16.52 less than for the conventional car using copper steel.

In Car *C* the body sheets and plates in contact with the lading have been made of thicknesses which can be expected to give longer life in general service than copper steel in the standard A. A. R. car. The cost of those parts is slightly more than for corresponding parts of copper steel. In view of the longer life to be expected, the cost of general maintenance for this design is estimated to be the same as for the standard car built of copper steel, and $1.50 has been added as the extra cost for the special ABLC brake.

The features of construction of Car *D* already mentioned tend to reduce corrosion of the body sheets and to lengthen the life of the structural members. Therefore, the annual cost of maintenance per car is assumed to be the same as for Car *B*, except for the ABLC brake.

Because Cars *C* and *D* have larger capacities than Cars *A* and *B*, fewer units of the former are required if all the cars are to handle the same amount of traffic. Therefore, the maintenance costs for Cars *C* and *D* are reduced as indicated by Item 8.

The rate of 7 per cent for fixed charges is based on 3.25 per cent interest, 2.65 per cent depreciation, and 1 per cent for taxes, which are ample under present conditions.

Financial Results

Items 13 and 14 in Table II sum up the net effects of the preceding items. The relatively small net return on Car *B* may seem surprising. It is advisable to point out that on some railroads hopper-car sheets last about half the life assumed in this estimate. In such cases, the net return on Car *B* may increase to 15 per cent of the added investment or even more.

Cars *C* and *D* effect substantial savings in operating expenses, excluding car maintenance. The amount of such savings that accrue to the car owner depends on the proportion of its service which the car performs on the home road.

The extra cost of the AB load compensating brake over the standard AB equipment has been charged to the lightweight cars. The relative uniformity of braking ratio over the entire range of car weight and the high ratio on loaded cars which the ABLC brake insures has definite value in operation which cannot be estimated.

In estimating expenses, the costs of materials and labor currently in effect have been used. If during the life of a car costs increase or decrease substantially, the changes in such costs would, almost certainly, have about the same proportionate effect on cars of both types and materials. Therefore, changes in costs would probably have little effect upon the differences in costs shown in the tables, or upon the validity of the conclusions derived from them.

If the factors in Table II are changed to correspond with the data for some individual railroad, the results may be altered substantially. However, Table II shows in a general way that the application of high-strength steel in hopper cars is likely to effect the greatest economy when the weight of the body is reduced considerably.

Lightweight Gondola Car

Because gondola cars usually can be loaded to their maximum carrying capacity, reduction in weight of the empty car results in operating savings comparable to those effected by weight reduction in hopper cars. Gondolas are usually heavier than hoppers of the same nominal capacity, and substantial weight savings can generally be made without requiring special brake equipment.

To give an indication of the probable results that would be secured from the use of high-strength steel to reduce weight in gondola cars, comparative data are presented in Table III for two designs of 50 tons' capacity with inside length of 41 ft. 6 in. and inside height of 4 ft. 10 in.

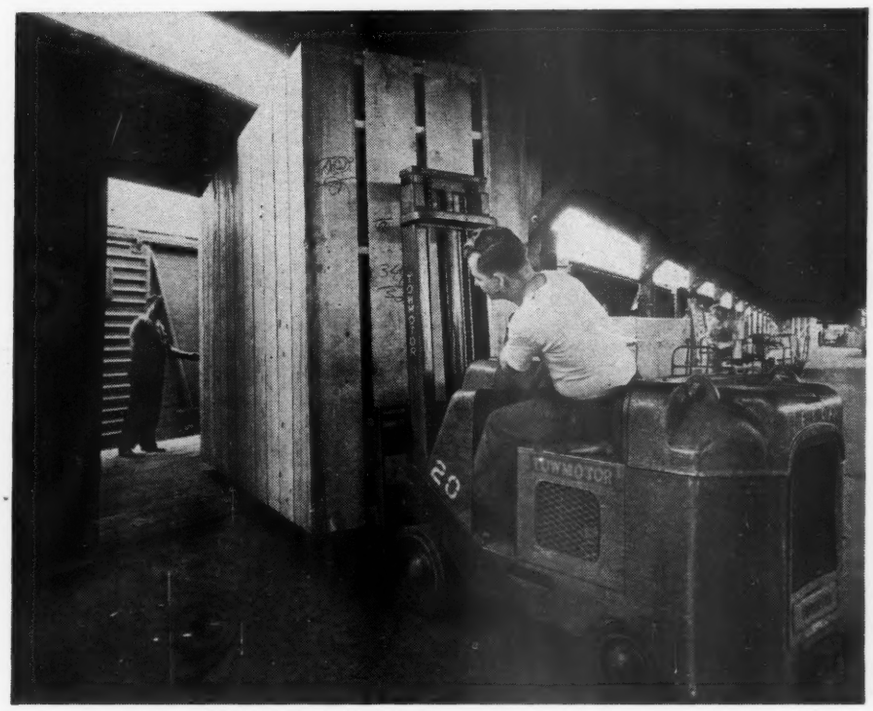
Lightweight Box Cars

Substantial reduction from the weight of standard copper-steel box-car designs can be effected with high-strength steel at relatively low cost. Representative designs with varying degrees of weight reduction in the body structure have now been in service for ten years or more.

The results obtained with those cars indicate that relatively light high-strength steel construction can be designed to provide ample strength, stability, and serviceability. As an example to illustrate the relative costs for a conventional box car and a car of the same size with high-strength steel body, a design which effects relatively small reduction of weight has been selected. This has been chosen because it may be considered representative of several lots built in substantial numbers, some with all of the principal car parts welded as sub-assemblies and riveted to form the complete body, and others with super-

Frisco's $200,000 freight station at Birmingham, Ala.

* * *



The handling of large, bulky materials, as well as trailer and palletized loadings, is being speeded at the Chicago, Milwaukee, St. Paul & Pacific's Chicago (Galewood), Ill., freighthouse by detailed planning of movements and through the use of mechanized material-handling equipment

Table III—Relative Costs for 50-Ton Gondola Cars

Inside length, 41 ft. 6 in.; inside height, 4 ft. 10 in.; solid bottom

	E Conventional design, copper steel	F Similar car, high-strength-steel body
1—Lightweight of car, lb.	45,600	41,200
2—Maximum load, lb.	123,400	127,800
3—Number of cars for same capacity as car E	1.000	.9656
4—Estimated price of car	$3,600	$3,690
5—Cost for number of cars in Item 3	$3,600	$3,563
6—Annual saving in operating expense, excluding car maintenance	Base	$ 36.61
7—Average annual cost of maintenance, per car	$115.00	$110.00
8—Maintenance cost for number of cars in Item 3	$115.00	$106.20
9—Annual saving in maintenance	Base	$ 8.80
10—Total annual operating saving	Base	$ 45.41
11—Fixed charges on Item 5 at 7 per cent annually	$252.00	$249.41
12—Net change in fixed charges	Base	-$ 2.59
13—Net average annual change in cost	Base	-$ 48.00
14—Net return on additional cost per car, per cent	Base	53.3

structures riveted and underframes partly welded.

The designs referred to above, in the 40-ft. 6-in. body length, effect average weight reductions of about 2,300 lb. The use of such cars as an illustrative case does not imply any advocacy of relatively small weight savings, since high-strength-steel cars of much lighter construction have proved their durability. Inasmuch as one of the hopper cars in Table II illustrates the result of substantial weight saving, it was considered appropriate to show cost items for a box car representing conservative design and relatively small weight reduction.

The data in Table IV conform in general to the two preceding tables except that no credit has been taken for heavier loading of the lightweight car. The A. A. R. report previously mentioned showed the annual savings per ton of weight reduction in box cars based on data for 1941, as $10.95 for steam locomotive operation and $8.40 for Diesel operation, an average of $9.67. Increasing this amount by 30 per cent to allow for subsequent changes in costs of material and wages brings the present annual saving per ton to $12.57.

The best available information indicates that the average annual cost of maintenance for conventional box cars is approximately $175. This is believed to be a reasonable average, being about 17 per cent below the average of all cars for 1946. The saving in maintenance effected by the substitution of high-strength steel for copper steel is difficult to determine because ordinarily box cars are in service longer than hopper cars before appreciable repair work, due to deterioration of the steel body structure, is required. However, it seems conservative to estimate that the average annual cost of maintenance will be reduced about 5 per cent because of the superior corrosion resistance of the high-strength steel.

The final figure in Table IV indicates that box cars of high-strength steel can be designed for moderate weight reduction and sturdy, long-lived construction with assurance that, in service on most railroads, operating savings effected by such cars will yield an attractive return on the additional investment.

Table IV—Relative Costs for 50-Ton Box Cars

	G Conventional design, copper steel	H Similar car, high-strength-steel body
1—Light weight of car, lb.	46,000	43,700
2—Maximum load, lb.	123,000	125,300
3—Estimated price of car	$ 4,000	$ 4,075
4—Annual savings in operating expenses, excluding car maintenance	Base	$ 14.45
5—Average annual cost of maintenance per car	$175.00	$166.25
6—Annual savings in maintenance	Base	$ 8.75
7—Total annual operating saving	Base	$ 23.20
8—Annual fixed charges on Item 3 at 7 per cent	$280.00	$285.25
9—Net change in fixed charges	Base	+$ 5.25
10—Net average annual change in costs	Base	-$ 17.95
11—Net return on additional cost per car, per cent	Base	23.9

In calculating the savings effected by reduction in weight of box cars, the assumption is generally made that lightweight box cars will carry no more load than conventional cars. This disregards the effect of increased capacity on the loading of wheat and other grains, and some other commodities, which can utilize the full load limit of the car. An exhibit presented by Julius Parmelee in I. C. C. Docket 26712 showed that, when the average capacity of box cars increased 4.6 tons, the net tons per loaded car of wheat also increased 4.6 tons. I. C. C. statistics of loadings of box cars show that the types of lading which can utilize the full weight capacity of the cars make up approximately 12 per cent of the total loadings. For railroads operating in the grain producing territory, this percentage would be substantially higher.

As previously mentioned, when loadings utilize full weight-carrying capacity, the number of cars required to handle a given traffic is less for the lightweight car than for the conventional car. Therefore, actual savings larger than those calculated can be expected. While this factor has been disregarded in calculations of savings effected by reduction in the weight of box cars, it has probably not been overlooked by railroads serving the principle grain producing areas, because many of those roads are using lightweight high-strength-steel construction in their new box cars.

In presenting this discussion of the economics of lightweight high-strength-steel freight cars, it was considered advisable to concentrate on the practical aspects of applications in those types of equipment which are most numerous. No reference has been made to refrigerator cars. Various articles have pointed out that, because of their high operating speed and high mileage, refrigerator cars will effect much more saving per ton of weight reduction than box cars. The large proportion of refrigerator cars being built of lightweight high-strength-steel construction proves the general acceptance of that idea.

When railroads are considering the adoption of lightweight freight cars, they are often concerned about the percentage of total mileage which the cars will make on the home road. In recent years abnormally large proportions of freight cars have been on foreign lines but recent developments indicate that this condition may be improved. However, as the percentage of modern equipment increases, every road will benefit from lightweight cars owned by other roads and this will in general compensate for the low mileage of lightweight cars on home lines. At present, about 100,000 high-strength-steel cars are in service or on order in the United States, and the reciprocal situation is constantly improving.

Summary

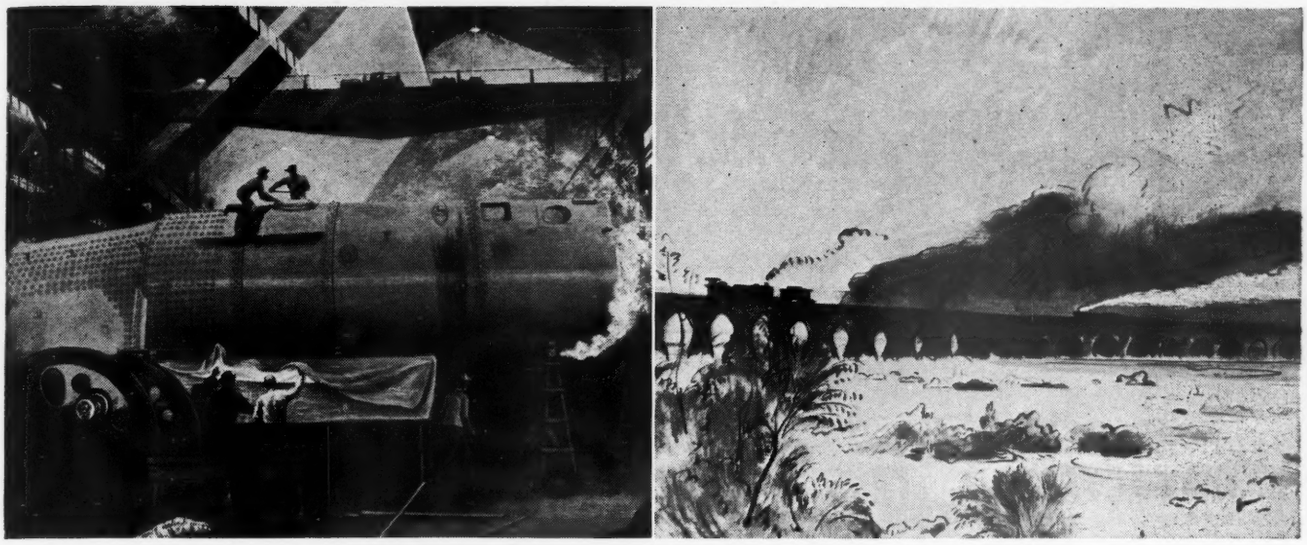
The conclusions drawn from the analysis of economics set forth in Tables II to IV can be stated briefly as follows:

If corrosion-resistant high-strength steel is substituted for copper steel in hopper cars without reduction of weight, the net saving is likely to be a relatively small per cent of the additional cost, except in service where body sheets have abnormally short life.

Hopper cars of high-strength steel, designed for substantial reduction of weight and increased capacity, should usually effect substantial net savings, even though no saving is credited for the advantages which seem certain to result from the use of a load-compensating brake.

Substantial weight reduction can be effected in nearly all types of gondola cars without necessitating the application of special brake equipment. Estimated savings will yield a large return on the additional cost for high-strength steel.

Weight reductions in high-strength-steel box cars vary substantially. Analysis of expenses for a conservative design indicates that even in such cars high-strength steel should be a profitable investment.

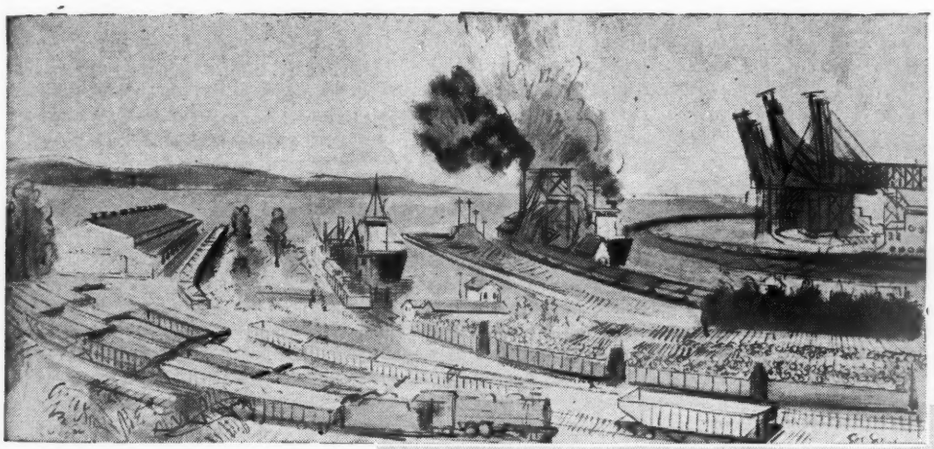


As the artists see the Baldwin Locomotive Company's plant and the Pennsylvania's stone-arch bridge across the Susquehanna river. From paintings by Ernest Fiene (left) and Joe Jones (right)

A Parade of Pennsylvania Pictures

A group of 116 paintings, drawings, and sketches by 14 American artists, forming the Gimbel Pennsylvania Art Collection, has been collected to go on tour, first in Pennsylvania and later throughout the United States, to show through the artists' eyes that state's industries and shrines and its people's environment. Included in the group are pictures representing the railroads at work, as illustrations show.

The collection will be on exhibition in Pittsburgh, Pa., January 15, 1948, through February 22. Subsequently it will be shown, in most cases for periods of approximately three weeks at each point, at Harrisburg, Wilkes-Barre, State College, Reading, New Hope, Buck Hill Falls, Erie, and Lancaster. The exhibit schedule beyond next November has not yet been announced.



Rails and water meet at Erie (From a painting by Joe Jones)

Looking from the hump across the Pennsylvania's yards at Hollidaysburg (From a painting by Joe Jones)

A Plan to Revitalize the National Transportation Policy

By ANTHONY G. ALLISON
Vice-President, Transportation Association of America

FOR a quarter of a century or more, the lack of a clearly defined and thoroughly integrated national transportation policy has continually hampered the constructive, free development of transportation service in the United States. This lack of a definitive and constructive governmental policy has given rise to a national transportation "problem."

The time is long gone when mere discussion of this transportation problem will suffice. The complexion of transportation in the United States has changed. At the time the Transportation Act of 1920 was written, traffic was moved by rail and water; at the time the Transportation Act of 1940 was written, traffic was moved by rail, water, highway, air and pipeline. The Act of 1920 said it was to be the policy of the Congress "to foster and preserve in full vigor both rail and water transportation"; the 1940 Act said that it was to be the policy of the Congress to "provide for fair and impartial regulation of all modes of transportation subject to the provisions of this act, so administered as to recognize and preserve the inherent advantages of each."

Private Enterprise in Danger

Between 1920 and 1940 several laws dealing with transportation were enacted, and many investigations and recommendations were made to, through, and by public, semi-public, and private organizations of all descriptions. The subject of transportation has never wanted interest and attention, but the approach to the subject—or problem—as a whole, has never had the benefit of an organized effort to reconcile the views of all parties of special interest in transportation and to distill these various attitudes into integrated national policy; piecemeal law has resulted from the piecemeal influences of special interest, and the public interest has inevitably suffered.

Events of the past six or seven years have made a solution of the national transportation problem an immediate necessity. The existence of the transportation service industry as a privately-owned-and-operated enterprise is definitely endangered. Carrier credit, for example, has been impaired to such an extent that it is approaching the vanishing point at a time when, for the good of the national economy as well as for the whole common-carrier industry, funds are needed for the improvement of service, for the rehabilitation of operating facilities, and for the purchase of new equipment to replace units battered and worn out through intensive use during the war years, and through the effects of obsolescence. These necessary improvements and replacements require extensive borrowing since earning power of the properties as a whole is not now great enough to underwrite betterments out of current earnings.

With the money market becoming increasingly apprehensive over the future of the railroads, for example, the railroads are beginning to find the usual sources of new financing sympathetic but reluctant. If and when borrowing from private sources becomes prohibitive in cost, the railroads will be compelled to petition for government aid, a move which is liable to insinuation of doctrinaire government control, and thus socialization.

The situation in which the railroads find themselves is not peculiar to that segment of the transportation industry alone; the air lines, motor and water carriers also have to cope with conditions similar in principle but different in detail, and arising from the same set of circumstances.

Through the many years that there has been even a limited awareness that a transportation problem actually existed, the contribution to its solution made by those outside government, and outside participation in pressure-group action, has been limited to letters to the editor, to articles in the public press, testimony in public hearings, and so on. The Transportation Association of America, anxious to assist, in the public interest, in the adoption of a clarified, definitive policy, is actively enlisting the aid of *all* parties of interest in the formulation of a policy to be proposed as a model for enactment by the Congress.

To the end of making a lasting and much needed contribution to the solution of the transportation problem, House Resolution 318 was introduced by Representative Clarence F. Lea, chairman of the House committee on interstate and foreign commerce, in 1946. This was followed by the issuance of the "topical agenda" to some 35,000 parties of interest. Replies to this national inquiry were received and compiled by a special staff for the committee.

In the early months of this year, following a series of conferences with the new chairman of the House committee, Representative Charles A. Wolverton, the Transportation Association agreed to undertake to (1) resolve the issues of the transportation problem among the various parties of interest, and (2) draft the essentials of a new national transportation policy. This work is now well under way.

A New Approach

The organizational procedure involves a new approach, the participation of a system of panels. These are: a national user panel, an investor panel (which will be divided into three divisions—eastern, southern and western—to give effect to regional investor groups), five transport panels, each covering its specific form of transportation, an economists' panel, and a panel of other interests. These panels will work in harmony with the Steering Committee, and will be backstopped by regional advisory forums.

A substantial amount of spadework has already been completed in addition to the building of the organization. A digest of all federal laws dealing with transportation questions has been prepared by the legal panel's research staff, and will be published by February, 1948. The Report of the Special Subcommittee on Transportation of the House Committee on Interstate and Foreign Commerce (also known as the Lea Report) will be used to develop the basic issues. The transportation problem will first be broken down into its component parts, or issues, through the operation of the Steering Committee, which will channel such issues to the appropriate panels for action and report, or recommendation. Each conclusion or recommendation will carry with it a complete economic statement in support of the position taken. The public interest will be the criterion by which every economic issue will be weighed and evaluated.

The results of the deliberations of the several panels will be returned to the Steering Committee for correlation

purposes and will then be presented to the Regional Advisory Forums, and to the representatives of the public at large. Through this procedure a collation of influence of strictly regional character can be secured—the transportation problems of the far west, the New England area, the southwest, south and so on will have equal weight, and the opinions of a representative group of unorganized citizens will be taken into account on an equal basis with those groups organized for special purposes. The final product of this project will be the basis for proposed national transportation policy irrespective of any recommendations made by the Transportation Association of America from its own studies of the problem.

The net result of the Association's procedure will be drafted, by the legal advisory group, into a legislative proposal for presentation to the Congress for consideration. Through this means, or procedure, the Congress will receive a proposal for new policy which will be the product of *Democracy in Action*, and which will be a sublimation of special interest for the public welfare.

Never before, perhaps, has a national economic problem been approached for solution on such a basis. The opportunity is here provided to the leaders of our enterprise system to prove to the whole world that they can solve national economic issues under democratic processes—proving that private enterprise can work out its own problems as free people in a free country.

Panel Members

All who deal with problems which require facts and a proper thorough analysis of those facts as a prerequisite to solution, know from experience if not from preknowledge, that facts, like shoes, come in different sizes and that a good understanding of the difference between a big fact and a little fact is of paramount importance. With this thought in mind, unremitting effort has been applied by the Transportation Association of America and its friends to assure the participation in this endeavor of persons of the highest calibre and accomplishment in their respective fields.

For the sake of brevity I will only highlight the personnel selected for this economic statutory cooperative project. At the head of the national user panel is Charles W. Braden, general traffic manager of the National Distillers Products Corporation of New York. He is supported by 27 top-ranking representatives of users of transportation of all kinds—men representing every important grographic area—in fact, some 20 states are represented on the user panel.

The legal advisory group is headed by Chauncey H. Hand, Jr., of Dorr, Hammond, Hand & Dawson. On his committee serve five men representative of the various transport agencies and agriculture. In addition three fulltime lawyers are devoting their energies to research.

August Ihlefeld, president of the Savings Banks Trust Company, is chairman of the national panel of investors, Eastern division. He is supported by 14 men representatives of all classes of investors in the eastern area. In process of organization at the present time are the five transport panels and the southern and western divisions of the investor panel.

The Transportation Association has set up a special committee of the board of directors to work intimately with the cooperative project for the House committee on interstate and foreign commerce. This committee includes: James L. Madden (chairman). vice-president, Metropolitan Life Insurance Company; Sydney Anderson, director of General Mills, Inc.; W. J. Hammond, vice-president, Inland Steel Company; Charles R. Musgrave, vice-president, Phillips Petroleum Company; W. A. Patterson, president of United Air Lines; B. M. Seymour, president of Associated Transport, Inc.; and R. E. Woodruff, president of the Erie Railroad.

The success of this undertaking largely depends upon the support given to it by the leaders of our enterprise system. This is a new venture in dealing with national economic problems. We are blazing a new trail for the future.

Small Fork Truck

A new center-control fork truck, designed, it is said, to meet the need for a small, light-weight truck of 1,000 lb. capacity, has been announced recently by the Baker Industrial Truck Division of Baker-Raulang Company, 2168 West 25th street, Cleveland 13, Ohio. This truck has a 36-in. wheelbase and an overall length, exclusive of forks, of 53⅝ in., while its width and weight are respectively 28 in. and 2,805 lb. A turning radius of 63½ in. plus the length of the load is claimed for this fork truck. Powered by a battery of 6.7 k.w.h. capacity, it has three speeds forward and the same number in reverse.

The Baker truck's maximum capacity is said to be 1,000 lb. when carrying a load 30 in. in length. The manufacturer has furnished the following information as to the capacity of the truck when carrying loads of various lengths.

Load	Load Length	Load	Load Length
1,000 lb.	30 in.	715 lb.	48 in.
880 lb.	36 in.	650 lb.	54 in.
790 lb.	42 in.	600 lb.	60 in.

Baker fork truck for use in close quarters

Baker has provided its truck with separate control levers for lifting and tilting operations. Specifications state that the maximum height of lift for the truck is 108 in. and a backward tilting of 10 deg. is possible, while forward tilt is limited to 3 deg.

Cheshire Advocates Changes in Car Inspection System

IN an address before the Chicago Car Foremen's Association on December 10, F. E. Cheshire, vice-president (operating and mechanical) of the Chicago, Indianapolis & Louisville, criticized the present system of freight car inspection with its many and frequent attendant delays to the movement of shippers' goods. In its place he advocates a system based upon a thorough inspection of the empty car before loading and repairs to the car sufficient to return it to full serviceability. In his remarks he said, in part:

"Having lived and worked with carmen, as one of them, for so many years, I feel not only qualified to criticize but obligated, by reason of the privilege of added perspective, to be constructively frank. In giving full credit to the advancing accomplishments of the men who design cars, I regret to have to comment that the men who maintain them have not kept pace with the improvement in design. And having made that charge, I hope to convince you that it is true. Having done that, I have the faith in your collective abilities to think that something constructive will be done about it.

Too Much Time Lost

"To be specific: There is entirely too much time taken up in making too many inspections of cars. I believe you will agree that one good inspection is enough to find out what, if anything, is wrong with a car, and that it is not necessary as a practical matter to repeat the process every few miles whether or not the car is interchanged. The shipper is interested in the earliest possible delivery of his freight and is entitled to that kind of performance. Too many inspections consume time unnecessarily. It is immaterial whether the inspection is made on the ABC railroad or the XYZ railway. The actual physical condition of the car is the thing and not the individual who inspects it.

"Years ago there were several gages on the various lines and trucks had to be changed or the load transferred at junctions. Consistently progressing, the gages were standardized yet some lines still elected to transfer their equipment and keep it on line. Today equipment is freely interchanged but we still retard the movement of traffic by inspection patterned to the individual line. I have a feeling that you will generally agree that carmen can all make such inspection as is necessary to provide a condition of equipment that will assure a safe and successful trip to destination, barring the rare development of a defect en route. If you can arrive at that premise then the first step has been taken in expediting traffic movement.

"Then, with an adequate inspection made, such impairment of serviceability as is shown should be promptly and thoroughly corrected, not just to move the car off line, but preferably to restore complete serviceability; if this is not practicable in some few cases, then at least to carry it to final destination. Car Inspector Joe Doakes, of the A. B. C. railroad should be qualified to inspect cars for movement over the XYZ as well as over the road employing him. And Joe Doakes' inspection in St. Paul should be adequate to move the car to New York—barring the rare development of a defect en route—where *before* the car is again reloaded the next necessary inspection should be made. Transportation men have no license to interfere with the continuous movement of the customer's shipment. Quite the contrary, they have an obligation to expedite that movement by every means available to the industry—to assure expeditious and dependable transportation.

Analyze and Minimize

"What is here advocated is not new. Individual railroads have done much in the direction of minimizing interference with continuous traffic movement. The further effort required is to extend such commendable practice and include so-called 'interchange inspection' in the whole, rather than as an accepted impediment each time a car moves from one railroad to another. Analyze both the necessity and actual benefits of such frequent inspections as are made today—on railroads as such, and in interchange between railroads. Standardize and minimize inspection. No one is better qualified to do the requisite soul searching than the men who perform and supervise inspection. Let us modernize these practices to take full advantage of the improvement in the design and materials in cars.

"I would further urge that each of you devote the time necessary for keeping abreast of the results of the many things done to produce rail transportation, to analyze these results on your employing property, and in the industry as a whole. Know the fundamental problems of your job and of the whole industry."

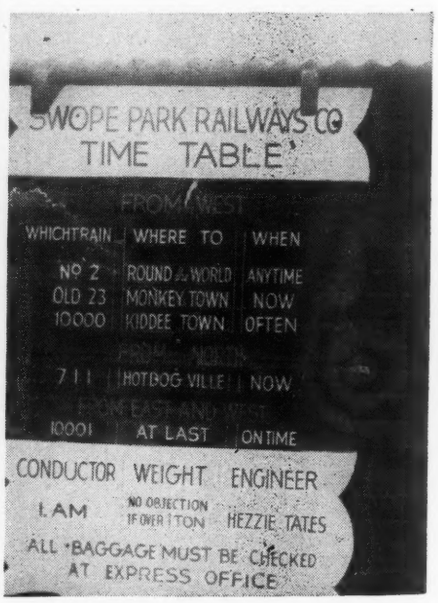
Sees the Chicago Tribune Preaching the New Deal

In the following letter to the editor of the Chicago Tribune, published in the November 26 issue of that newspaper, W. F. Peter, general counsel of the Chicago, Rock Island & Pacific, comments on an observation made in that paper's editorial columns:

In your editorial "Keep the Waterway Open" you say the request of shippers on the Illinois waterway for the government to supply coast guard icebreakers to keep the waterway open for traffic this winter is "thoroughly justifiable" since Chicago faces a shortage of fuel. If the river is kept open, coal and oil can be moved.

The shippers' request and your approval have a strong New Deal flavor. Let the government see that we are kept warm. It may be suspected that the barge owners rather than the shippers, are the ones who want the Government to supply the icebreakers.

Your approval needs but one amendment. Considerable snow will fall and ice form in this area this winter and the railroads whose lines enter Chicago will get their full share with the usual blocking of tracks and frozen switches. Why not let the government marshal a few thousand of the old W.P.A. broom brigade to clear the tracks so that the coal and oil shipments will suffer no delay? The railroads would undoubtedly be willing to pay these persons the same amount that the barge owners will pay for the services of the icebreakers.



Miniature railways in parks fan kids' interest in railroads. This is the bulletin board of the steam-operated road in Kansas City's Swope Park

Orders for equipment like this Santa Fe Diesel-electric helped materially in putting September purchase figures above August's. The picture was taken at Barstow (Cal.) fueling station.

Buying of Manufactured Products Up 14 Per Cent in One Month

IN the month of September Class I railroads bought $143,297,000 of manufactured products, including equipment, according to *Railway Age* estimates. This represented an increase of 14 per cent over buying of similar items during the month of August. Although purchases of materials and supplies, excluding fuel, fell off 8 per cent from August, equipment orders were more than double those of August and brought September's total well above August's. In all items except equipment, September expenditures showed a decline of from 1 to 21 per cent, with crosstie buying leading the downward trend. However, purchases of manufactured articles in the first nine months of 1947 were 30 per cent above expenditures for like items in the same period of 1946.

Equipment orders, which totaled $43,430,000, included 9,917 freight cars, at an estimated cost of $38,680,000, 1 passenger car, whose estimated cost is $100,000, and 32 Diesel-electric locomotives, representing an expenditure of approximately $4,650,000.

The volume of buying during the month of September raised the total for the first nine months of the year to $1,890,079,000. With three months still to go there is little doubt that railroad

1947 RAILWAY PURCHASES

September buying of materials, equipment and fuel brought the total for the first nine months of 1947 close to $2 billion.

	**September, 1947	Cumulative total, 1947
Equipment*	$43,430,000	$459,704,400
Rail	7,199,000	65,150,000
Crossties	7,074,000	71,297,000
All other material	85,594,000	811,091,000
Total from manufacturers	$143,297,000	$1,407,242,400
Fuel	55,124,000	482,837,000
Grand total	$198,421,000	$1,890,079,000

* Amount placed on order.
** Subject to revision.

purchases for the year will go beyond the mark of $2¼ billion.

Dollar value of inventories continued to climb, reaching a new high of $742,039,000. Fuel led the way with an increase of 12 per cent from August. This is a reflection of the fuel picture for the year ahead, which is anything but reassuring.

The stock of crossties continued a decline which was to be expected due to summer tie renewal programs. Rail and scrap inventories were the other items whose rise contributed to the increase in stocks on hand.

September* Purchases of Manufactured Goods (Excluding Equipment and Fuel)

Sept. '47 Compared to Other Septs. (000)

Year	Amt.	% Change
1941	$75,468	+32
1942	62,834	+59
1943	83,209	+20
1944	89,296	+12
1945	85,813	+16
1946	95,861	+ 4
1947	99,867	

Sept. '47 Compared to Other Months '47 (000)

Month	Amt.	% Change
Jan.	$101,888	— 2
Feb.	92,196	+ 8
Mar.	104,313	— 4
Apr.	115,189	—13
May	109,506	— 9
June	106,048	— 6
July	109,973	— 9
Aug.	108,656	— 8
Sept.	99,867	

Nine Month Totals '47 and Other Years (000)

Year	Amt.	% Change
1941	$488,358	+94
1942	649,490	+46
1943	622,403	+52
1944	771,887	+23
1945	743,823	+27
1946	729,892	+30
1947	947,636	

September* Purchases of Rail

Sept. '47 Compared to Other Septs. (000)

Year	Amt.	% Change
1941	$5,503	+31
1942	3,620	+99
1943	5,613	+28
1944	5,647	+27
1945	7,691	— 6
1946	7,220	— 1
1947	7,199	

Sept. '47 Compared to Other Months '47 (000)

Month	Amt.	% Change
Jan.	$7,810	— 8
Feb.	7,109	+ 1
Mar.	6,855	+ 5
Apr.	6,843	+ 5
May	7,050	+ 2
June	6,459	+11
July	8,114	—11
Aug.	7,710	— 7
Sept.	7,199	

Nine Month Totals '47 and Other Years (000)

Year	Amt.	% Change
1941	$43,871	+49
1942	42,752	+52
1943	41,574	+57
1944	56,860	+15
1945	56,316	+16
1946	43,720	+49
1947	65,150	

September* Purchases of Crossties

Sept. '47 Compared to Other Septs. (000)

Year	Amt.	% Change
1941	$4,347	+63
1942	5,127	+38
1943	9,032	—22
1944	7,866	—10
1945	7,081	— 1
1946	7,608	— 7
1947	7,074	

Sept. '47 Compared to Other Months '47 (000)

Month	Amt.	% Change
Jan.	$7,179	— 1
Feb.	6,704	+ 6
Mar.	7,930	—11
Apr.	8,819	—20
May	8,165	—13
June	8,174	—13
July	8,256	—14
Aug.	8,996	—21
Sept.	7,074	

Nine Month Totals '47 and Other Years (000)

Year	Amt.	% Change
1941	$36,404	+96
1942	50,640	+41
1943	59,995	+19
1944	65,557	+ 9
1945	54,322	+31
1946	66,068	+ 8
1947	71,297	

September* Purchases of Other Material

Sept. '47 Compared to Other Septs. (000)

Year	Amt.	% Change
1941	$65,619	+30
1942	54,087	+58
1943	68,564	+25
1944	75,783	+13
1945	71,041	+20
1946	81,033	+ 6
1947	85,594	

Sept. '47 Compared to Other Months '47 (000)

Month	Amt.	% Change
Jan.	$86,800	— 1
Feb.	78,383	+ 9
Mar.	89,528	— 4
Apr.	99,527	—14
May	94,291	— 9
June	91,415	— 6
July	93,603	— 9
Aug.	91,950	— 7
Sept.	85,594	

Nine Month Totals '47 and Other Years (000)

Year	Amt.	% Change
1941	$508,083	+60
1942	556,098	+46
1943	520,834	+56
1944	649,470	+25
1945	633,185	+28
1946	620,104	+31
1947	811,091	

September* Purchases of Fuel

Sept. '47 Compared to Other Septs. (000)

Year	Amt.	% Change
1941	$31,597	+74
1942	36,318	+52
1943	45,702	+21
1944	43,977	+25
1945	44,325	+24
1946	51,148	+ 8
1947	55,124	

Sept. '47 Compared to Other Months '47 (000)

Month	Amt.	% Change
Jan.	$58,490	— 6
Feb.	54,612	+ 1
Mar.	57,447	— 4
Apr.	51,486	+ 7
May	51,490	+ 7
June	50,177	+10
July	48,482	+14
Aug.	55,529	— 1
Sept.	55,124	

Nine Month Totals '47 and Other Years (000)

Year	Amt.	% Change
1941	$250,151	+93
1942	311,026	+55
1943	396,901	+22
1944	445,374	+ 8
1945	418,493	+15
1946	405,916	+19
1947	482,837	

* Subject to revision.

September* Total Purchases (Excluding Equipment)

Sept. '47 Compared to Other Septs. (000)

Year	Amt.	% Change
1941	$107,065	+45
1942	99,152	+56
1943	128,911	+20
1944	133,273	+16
1945	130,138	+19
1946	147,009	+ 5
1947	154,991	

Sept. '47 Compared to Other Months '47 (000)

Month	Amt.	% Change
Jan.	$160,279	**— 3**
Feb.	146,808	+ 6
Mar.	161,760	— 4
Apr.	166,675	— 7
May	160,996	— 4
June	156,225	**— 1**
July	158,455	— 2
Aug.	164,185	— 6
Sept.	154,991	

Nine Month Total '47 and Other Years (000)

Year	Amt.	% Change
1941	$ 838,509	+71
1942	960,516	+49
1943	1,019,304	+40
1944	1,217,261	+18
1945	1,162,766	+23
1946	1,135,808	+26
1947	1,430,374	

September* Inventories of Rail

Sept. '47 Compared to Other Septs. (000)

Year	Amt.	% Change
Sept. 1, 1941	$24,500	+22
1942	21,622	+38
1943	19,558	+52
1944	22,324	+33
1945	25,611	+16
1946	25,192	+18
1947	29,766	

Sept. '47 Compared to Other Months '47 (000)

Month	Amt.	% Change
Jan. 1	$39,192	—24
Feb.	31,447	— 5
Mar.	31,217	— 5
Apr.	29,775	— 1
May	26,875	—11
June	27.990	+ 6
July	26,536	+12
Aug.	28,509	+ 4
Sept.	29,766	

September* Inventories of Crossties

Sept. '47 Compared to Other Septs. (000)

Year	Amt.	% Change
Sept. 1, 1941	$51,745	+62
1942	55,800	+50
1943	59,185	+42
1944	71,306	+17
1945	62,070	+35
1946	74,454	+13
1947	83,771	

Sept. '47 Compared to Other Months '47 (000)

Month	Amt.	% Change
Jan. 1	$83,891	— 1
Feb.	88,293	— 5
Mar.	92,861	—10
Apr.	97,549	—14
May	89,906	— 7
June	89,782	— 7
July	88,686	— 6
Aug.	86,066	— 3
Sept.	83,771	

September* Inventories of Other Material

Sept. '47 Compared to Other Septs. (000)

Year	Amt.	% Change
Sept. 1, 1941	$276,661	+201
1942	392,513	+ 42
1943	376,180	+ 48
1944	427,277	+ 30
1945	448,110	+ 24
1946	464,973	+ 19
1947	555,498	

Sept. '47 Compared to Other Months '47 (000)

Month	Amt.	% Change
Jan. 1.	$476,625	+17
Feb.	490,734	+13
Mar.	498,159	+12
Apr.	519,985	+ 7
May	535,071	+ 4
June	542,096	+ 2
July	553,227	+ 1
Aug.	558,118	— 1
Sept.	555,498	

September* Inventories of Scrap

Sept. '47 Compared to Other Septs. (000)

Year	Amt.	% Change
Sept. 1, 1941	$10,380	— 4
1942	9,609	+ 4
1943	8,607	+16
1944	10,292	— 3
1945	13,979	—29
1946	11,546	—14
1947	9,979	

Sept. '47 Compared to Other Months '47 (000)

Month	Amt.	% Change
Jan. 1.	$12,572	—21
Feb.	11,929	—16
Mar.	17,017	—41
Apr.	11,221	—11
May	12,766	—22
June	10,929	— 9
July	9,239	+ 8
Aug.	9,880	+ 1
Sept.	9,979	

September* Inventories of Fuel

Sept. '47 Compared to Other Septs. (000)

Year	Amt.	% Change
Sept. 1, 1941	$32,632	+ 7
1942	50,434	+25
1943	61,204	+ 3
1944	67,538	— 7
1945	55,333	+14
1946	51,944	+21
1947	63,025	

Sept. '47 Compared to Other Months '47 (000)

Month	Amt.	% Change
Jan. 1.	$49,873	+26
Feb.	51,164	+23
Mar.	52,234	+21
Apr.	51,207	+23
May	55,973	+13
June	56,510	+12
July	56,565	+11
Aug.	56,135	+12
Sept.	63,025	

* Subject to revision.

September* Total Inventories

Sept. '47 Compared to Other Septs. (000)

Year	Amt.	% Change
Sept. 1, 1941	$395,918	+87
1942	529,978	+40
1943	524,734	+41
1944	598,737	+24
1945	605,103	+23
1946	628,109	+18
1947	742,039	

Sept. '47 Compared to Other Months '47 (000)

Month	Amt.	% Change
Jan. 1	$653,153	+14
Feb.	673,567	+10
Mar.	691,487	+ 7
Apr.	709,738	+ 5
May	720,591	+ 3
June	727,307	+ 1
July	734,253	+ 1
Aug.	738,709	+ 1
Sept.	742,039	

* Subject to revision

Kershaw Kribber

An auger-type, self-propelled, cribbing machine for ballast-stripping work in single-track territory, is being offered by the Kershaw Company, Montgomery, Ala. Known as the Kershaw Kribber, the machine is arranged for both on-track and off-track operation and is reported to be capable of operating at the rate of one-half crib every 30 sec. in cemented limestone ballast.

The machine comprises a walking beam, supported at each end on a pneumatic-tired wheel, on which are mounted the power unit, the controls, the operator's seat and the travel mechanism. Placed transversely at the center of the walking beam is a frame carrying the stripping auger and its related mechanism. The transverse frame is supported at one end by the walking beam and at the other by a two-wheel carriage, or guide dolly, the purpose of which is to ride on the nearest rail of the track.

In operation as an on-track machine the unit moves with the pneumatic-tired wheels on the track shoulder, while the carriage at the end of the frame moves on the track rail. For off-track operation, the carriage is removed and the end of the frame is supported on a special rail, which is laid on the ties outside the rails and held in place by wedged clips attached to the base of the track rail.

The machine is powered by a 9-hp. Wisconsin gasoline engine which drives two hydraulic pumps. The pumps operate hydraulic motors which, in turn, operate the travel gear and the ballast-stripping mechanism. When properly

Wanted—a System *to Produce Adequate Earnings*

In our December 6 issue, the leading editorial asserted that the railroads are suffering inadequate earnings—not because many people oppose their being allowed such earnings but because no *system* has been provided to assure them. Considerable comment has developed from this suggestion. Here is a letter from a vice-president of one of the large railway systems:

"I have been pondering the problem presented in the leading editorial of your December 6 issue, raising the question of a *system* which will assure the railroads of adequate earnings. I wish I knew the answer.

"As a contribution to the discussion, here are some of my tentative thoughts on the subject:

"1. It is desirable to have the Interstate Commerce Commission afford the carriers prompt rate relief as their expenses are increased from time to time because of wage increases, the cost of rules settlements, etc. How to accomplish this is the problem.

"2. Just thinking aloud—some plan might be found whereby the I.C.C. would be required to have a representative sit with each arbitration or emergency board as an impartial observer and promptly report the findings or recommendations of such boards to the commission with a recommendation for rate relief, if necessary.

"3. There are, of course, voluntary settlements of such matters between the carriers and the brotherhoods as witness the recent voluntary settlement with the conductors and trainmen, after the wage pattern had been set by the arbitration board in the case of the non-operating employees. In such cases, the parties could be required to send such agreements to the I.C.C. with an estimate of the cost thereof where, say, the cost will exceed one million dollars.

"4. Alternatively, since all such voluntary agreements are filed with the National Mediation Board, that board might be required to certify the settlements to the I.C.C. with an estimate of the cost to the carriers. That board might also certify to the I.C.C. a transcript of the evidence as well as the findings, recommendation, reports or awards of emergency and arbitration boards.

"5. Even if all this were done, of course, the effect of such settlements would vary from railroad to railroad. It can hardly be said that any two railroads have the same 'ability to pay.' Rules settlements in particular have differing effects on the various railroads. For example, a requirement that the operators of snow plows should be paid $1,000 an hour would have no effect on the Florida East Coast, but would bankrupt some of the northern railroads.

"6 The brotherhoods have long contended that they are not concerned with the ability of a carrier to pay. I think that such a view is erroneous—particularly in the case of a public utility.

"7. Another way to approach this problem might be a requirement of law that the I.C.C. participate in hearings or settlements of wage or rules cases, where it is contended by the carriers that the cost of the employees' demands would necessitate a request for an increase in rates, fares or charges. And the record in such cases might be considered as a part of the I.C.C. record on applications for an increase in rates, fares, or charges.

"8. Still another approach might be a requirement of law that the I.C.C. establish a 'labor department' and require the brotherhoods to serve notice upon the commission at the same time they serve the railroads in the matter of wages and rules.

"All these suggestions involve greater participation of government in railroad affairs. Even so, in my opinion, if it resulted in giving the carriers rate relief at approximately the same time their expenses are increased, the result would probably justify the methods necessary to that end."

The Kershaw Kribber in operation as an on-track unit

spotted for stripping a crib, the auger—a specially-designed, 6-in. circular conveyor with a hardened, removable cutter head—is placed in operation and a crowding gear, or feed, is brought into use to cause it to penetrate the crib to the center line of the track. It is said that ballast may be removed to a level 4 in. below the bottoms of the ties without disturbing the tie bed, resulting in a concave section between the ties. The arrangement of controls is such that the operator faces the work at all times and is afforded ample vision in each direction.

To clear for a train, the carriage frame is raised to an elevated position by means of a hand winch, an operation that may be performed, according to the manufacturer, in 30 sec. When the train has passed, the frame is lowered and the work resumed. It is claimed that two of the units, with two operators and one helper, operated in tandem on opposite sides of the track, will strip the ballast from as much as 700 ft. of track per day.

The hand-guided tilting electric fork truck by Yale & Towne

Hand-Guided Truck for Close Work

A hand-guided tilting fork truck, electrically powered, is the newest item in the industrial truck line of Yale & Towne Manufacturing Co., Philadelphia Division, 4531 Tacony street, Philadelphia 24, Pa. It is stated that this truck is capable of performing every function of the conventional full-size electric fork truck, but in addition has the advantage of being small enough to work in corners and spaces that are inaccesible to the larger units.

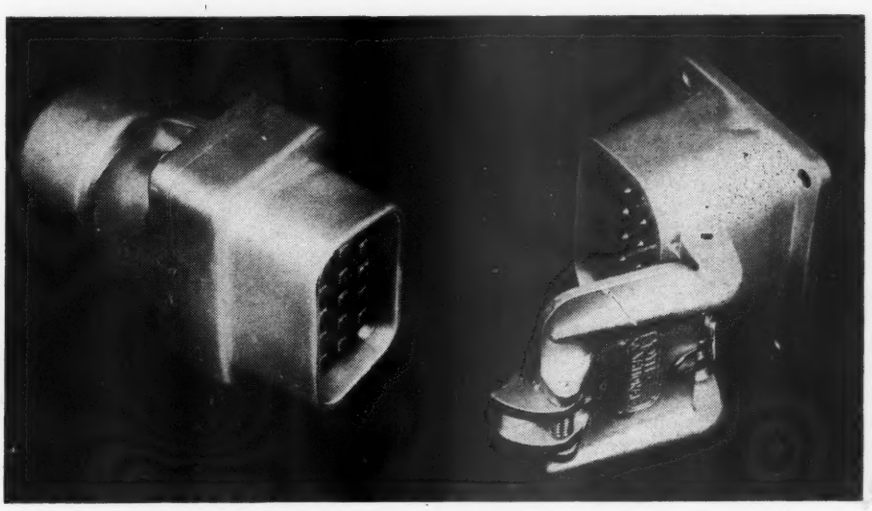
The truck weighs 3,200 lb., complete with the 12-volt battery which it uses. It can be operated at either of two forward speeds, or at two speeds in reverse. Its inside turning radius of 31 in. and outside turning radius of 81 in. are factors that make it possible for this truck to operate in such close quarters, it is claimed.

As for its work capacity, the truck is rated as being able to lift a load of 3,000 lb. if the load is not over 28 in. long, and 2,000 lb. if the loading is 48 in. long.

Car Circuit Connectors

The Pyle-National Company, Chicago, Ill., announces that it is now producing a 14-pole communication circuit plug and receptacle. These connectors are designed to be used on electric train lines for entertainment, announcements to passengers and telephone service. The units have been designed in exact accordance with the specifications of the Association of American Railroads, covered by Circular ESM-53, Mechanical Division, Electrical Section, entitled "Report of Committee on Application of Radio and Communicating System to Rolling Stock." (The report, which has been approved by the Electrical Section, was summarized in the October 25 issue of the *Railway Age*.)

The receptacles are furnished with weather-proof covers and they are located in pairs on the end of the car. The plugs, used on jumpers between cars, are designed so that pulling strain cannot be transmitted to the contacts.



Plug and receptacle for train-lining communication and entertainment circuits

Director Boles Would Deny Young a Seat on New York Central Board

Proposed report charges C. & O. chairman with "speculating" without regard to the public interest; finds he has a 0.000175 per cent interest in the Central's assets

ASSISTANT DIRECTOR C. E. Boles of the Interstate Commerce Commission's Bureau of Finance has recommended in a proposed report that the commission deny the pending applications of Robert R. Young and Robert J. Bowman for authority to serve on the New York Central's board of directors while continuing also to hold Chesapeake & Ohio directorships and their respective present positions of chairman and president of that road. The proposed report also recommends denial of the related petition of the C. & O. and Alleghany Corporation for release of the former's 400,000 shares of N. Y. C. stock from the requirement whereby it has been deposited with the Chase National Bank as independent voting trustee under the trusteeship created pursuant to the commission's June 5, 1945, order approving Alleghany's control of C. & O.

Assistant Director Boles would have the commission base its adverse orders on findings that granting of the applications and petition "would be tantamount to sanctioning a violation of section 5(4) of the Interstate Commerce Act and possibly section 7 of the Clayton Act"; that the applicants "have not shown such special circumstances as warrant a departure from conclusions stated" by the commission in prior directorship cases; and that they "have not shown that neither public nor private interests will be adversely affected" by the consummation of their plans.

As to the contentions of Messrs. Young and Bowman that such plans were calculated to bring important gains to the Central, the proposed report said the record in the proceeding "raises grave doubt whether the presence of the applicants on the board of directors of the New York Central would result in any financial or other benefits" to that road. The financial operations whereby the applicants put themselves in a position to bid for the Central directorships were appraised by Mr. Boles as evidence of a "willingness to take great risks" with C. & O. funds. And while he recalled that the commission's June 5, 1945, report had praised Mr. Young, the assistant director said that finding was made while financial matters were engaging the attention of the C. & O. chairman, who has since "moved into the field of operations." The proposed report's comment on these matters was as follows:

"Willing to Take Risks"

"As trustees of the Chesapeake & Ohio stockholders the applicants have shown a willingness to take great risks, speculating on their ability to get on the New York's Central's board by persuading the commission to overthrow all its precedents, and further speculating on their opinion that they can do a better job running the New York Central than can its present management. The applicants have further speculated in severing all connection with the Nickel Plate in anticipation of the approval of their proposals. Little regard either for the public interest or for the private interests of the stockholders of the Nickel Plate was displayed by the petitioners or the applicants in thus severing a connection of long standing which the commission had found to be in the public interest.

"Applicant Young's contribution to the successful operation of the Chesapeake & Ohio was recognized in the report filed with the order of June 5, 1945. . . . That finding was made while

Mr. Young Comments on the Boles Report

In a statement issued soon after Assistant Director Boles' proposed report was made public, Robert R. Young said:

"Today's I.C.C. report is another decision against the public interest by a government bureaucrat whose duty it is to further public interest—a decision which I publicly predicted some time ago.

"Difficult as it is for us [Mr. Bowman and Mr. Young] to accept this decision, it is even more difficult for us to take the commission's two-faced justice. This is a serious charge, but so are the facts.

"(1) Harry Hagerty, a Metropolitan Life officer, was quietly granted the right, without a hearing, to sit on the board of the New York, New Haven & Hartford railroad and the Erie railroad, at the very time we were required to appear before the commission in elaborate proceedings in a futile attempt to obtain a similar right. The Metropolitan Life Insurance Company is dominated by the investment bankers whose interests are adverse to those of the railroads.

"(2) Last year, when by government order, the Pullman Company was offered for sale, we made a bid identical to that of the railroad cartel plus a commitment to spend a half-billion dollars to replace the entire obsolete fleet of 5,000 Pullman cars. Our bid to replace monopoly with competition was turned down with I.C.C. connivance. The result is that the people must continue to ride for years to come in these same archaic Pullman cars at the same fares for which we would have provided new cars and new service.

"(3) 27 years ago Congress instructed the I.C.C. to devise a plan for consolidating the railroads into a small number of systems. Today there are still 130 Class I railroads. Now we have proposed to lay the groundwork for a major consolidation—one which, according to transportation experts, is the most natural and beneficial of all possible American railroad consolidations. In no other way but consolidation can railroads meet spiraling costs without a dangerous increase in rates. But here again the I.C.C. violates its public duty and turns us down.

"Of course, Mr. Bowman and I propose to go on fighting for our right to assert C. & O.'s ownership-management interest in the New York Central and for railway progress. Despite obstacles, we have licked them before in such progressive steps as competitive bidding, through service at Chicago, and breaking the black market in Pullman space. Eventually we will lick them here."

he was devoting his attention to financial matters. He has since moved into the field of operations, a field in which his experience is limited to 10 years as a director of the Chesapeake & Ohio and other railroads. The record is quite clear that he no longer intends to leave to experienced management the matter of operations, but seeks a voice in the operation of the New York Central and through it a larger voice or control in the Association of American Railroads in order that he may bring about reforms which he thinks are needed in the methods of operation."

The foregoing reference to taking "great risks" with C. & O. funds was elaborated upon in a footnote which said: "For the 400,000 shares of New York Central stock the Chesapeake & Ohio paid $18.98 a share. The total price paid was $7,593,174.29. The stock is currently selling around $13 a share, indicating a loss of approximateily $2,400,000 on the investment. To provide funds to make this investment the Chesapeake & Ohio sold its stock holdings in Wheeling & Lake Erie for $15,405,605.64. The stock sold was characterized by a witness for the applicants as a high-grade investment and had been paying regular dividends for a number of years."

Could Try to Merge

In another place the proposed report seemed to chide the applicants for expecting the commission to find that ultimate unification of the C. & O. and N. Y. C. would be in the public interest "on the faith of their prophecies," when they are "unwilling to step out on their own profession of faith" and seek immediate unification of the properties. "If," Mr. Boles said, "the applicants possess the great abilities, foresight and salesmanship attributed to them, there is no reason why they should not take their proposals directly to the stockholders of the two companies and persuade them as to the desirability of such unification, and having persuaded them file an application for the necessary authority under section 5(2) of the act. Failing that, there is nothing to keep them from filing an application under section 5(2) to acquire the limited control they now propose. In connection with such an application due consideration could be given to provision for other carriers and to employees who might be adversely affected by the proposals."

Meanwhile the proposed report had got under way with its outline of the applications and petition and its statement of their origin and objectives. The principal protestant is the Virginian, but the proposals are opposed also by the State Corporation Commission of Virginia and various towns and cities in that state and West Virginia. The Central, which has invited Messrs. Young and Bowman to join its board, was not a party to the proceedings; but two N. Y. C. officers, subpoenaed by the Virginian, testified at the hearing that their road would lose traffic and gain nothing in the way of improved credit standing if the directorship applications were approved. These witnesses were General Traffic Manager J. P. Patterson and Vice-President W. F. Place.

In considering the issues, Assistant Director Boles dealt first with that involving whether, in passing on the directorship and stock-release proposals, the commission may consider alleged benefits to the C. & O. and N. Y. C. of ultimate unification of the two carriers. Because much of the evidence in support of the proposals related to such ultimate unification, the assistant director interpreted the presentation as a request that the commission extend to the present C. & O.-N. Y. C. relationship its rule permitting interlocking directors among different carriers in the same system. At the same time he referred to applicants' testimony that "there may never be an application for control of one of the carriers by the other."

"Petitioners and applicants thus seek to justify their petition and applications on the basis of benefits to the Chesapeake & Ohio, the New York Central, and the public which are supposed to flow from a set of conditions which by the applicants' own admissions may never come about, but which in effect would require the commission to prejudge a matter which is not and may never be before it," Mr. Boles continued. He went on to refer briefly to applicable provisions of the Interstate Commerce Act, coming to the conclusion that the evidence pertaining to control of N. Y. C. or ultimate unification "is irrelevant to the principal issues before the commission and may not be considered in disposing of those issues."

"Not an Investment"

Turning then to the request for release of the N. Y. C. stock from the trusteeship, the proposed report said that this stock was not purchased by the C. & O. for investment, but "for the specific purpose of injecting Young's influence and policies into the affairs of the New York Central." It added that approval of the petition would result in

The "Forgotten Man" Speaks Up

An unusual feature of the regional hearings at Chicago, beginning November 3, in the freight rate case (Ex Parte 166), conducted by Interstate Commerce Commissioners Aitchison, Mahaffie and Splawn, was the appearance of a *stockholder* as a voluntary witness in support of the railroads' plea. As noted in *Railway Age* of November 8, page 54, he was J. Newcomb Blackman, of East Orange, N. J., who described himself as a "substantial stockholder in many of our largest railroads."

Mr. Blackman pointed out that the regulated public utilities and public service corporations, in such fields as the telephone, gas and electric light, have been permitted to earn 5½ to 6 per cent on their investments. "By comparison, however," he continued, "the railroads have been denied high enough rates to earn more than about half that much for many years." This, he thought, was "unfair and insufficient."

The railroads, Mr. Blackman asserted, have no control over wages, which constitute the greater part of their costs. Still more serious, he believed, is the fact that applications for increased wages are handled by governmental bodies which have no responsibility, and need feel no concern, as to whether the railroads, through the commission, will succeed in getting enough increased revenue to cover even the wage increases. Another injustice, he thought, was the fact that wage advances often have been made retroactive, whereas increases in freight rates and passenger fares have never been. This, he said, has cost the railroads "many millions of dollars."

"I am here as an individual," continued Mr. Blackman, "seeking to protect my interest as a stockholder. This seems to be an interest which has been largely forgotten in past rate cases."

Because the railroads have been denied sufficient returns, the witness asserted, they have been obliged to finance their needs by the use of money which should have gone to the stockholders in dividends. He stated the opinion that millions of railroad stockholders and voters are now determined to get a reasonable return on their investments.

"I believe," he added, "that the railroads of this country, before your body in this rate case, are entitled, after all the facts are known, to rates that will enable them to receive at least 6 per cent on their invested capital."

In closing, Mr. Blackman said that shippers should stand back of the railroads, "the backbone of the country," in their effort to get the rates necessary to enable them to remain in private ownership, under the American free enterprise system.

control of the Central, despite disclaimers of the applicants and petitioners.

"They have," the proposed report said, "very definite plans about things that should be done to improve the New York Central's traffic and financial condition. . . . They hope to have enough influence on the New York Central's board of directors to effect changes in its policies and to bring about cooperation between its traffic department and that of the Chesapeake & Ohio. The testimony of the applicants themselves clearly indicates that they expect granting of the petition and applications to result shortly in the two carriers being managed in a common interest. . . .

"Unlawful" Proposals

"Applicant Young anticipates making 'very substantial changes in New York Central's policies' as a result of his presence on the board of that carrier. He expects to revolutionize the Central's passenger service and equipment as well as the high-speed freight service, to 'put the New York Central back on its feet' and to 'save it from the tender mercies of reorganization.' While asserting that the New York Central is now dominated by a small clique of bankers in New York, he expects that his mere presence on the New York Central board will free it from the alleged banker control. He hopes to change the method of operation of the board, stating that 'they would change their habits and methods or they would not continue on the same board with me, or I would not continue on the same board with them.' However, he does not contemplate any resignations would actually be necessary. It is admitted that the contemplated changes are not so obviously in the interest of the New York Central that the latter, as an independent carrier, would adopt them without the 'salesmanship' of the applicants, backed by release of the stock from the voting trust."

Mr. Boles next discussed section 5(4), finding that the proposals as made would be unlawful thereunder. He also quoted from section 7 of the Clayton Anti-trust Act, which forbids stock acquisitions where the effect is to "substantially lessen competition." In this connection the assistant director anticipated his subsequent discussion of evidence which he interpreted as indicating that the result of the release of the Central stock from the trusteeship would be "to substantially lessen competition" between that road and the C. & O.

While he said that this finding of a section 5(4) violation would be enough to condemn the proposals, Mr. Boles nevertheless went on to recommend rejection on other grounds "should these conclusions be erroneous." This brought him to his consideration of the effect on "public and private interests," including comment on the "great stress" laid on "the benefits which it is asserted the Cheapeake & Ohio can bring to the New York Central in the handling of its passenger traffic."

"The record," that comment said, "shows that during the period 1936-46 the Chesapeake & Ohio accrued a loss of more than $47,000,000 from its passenger operations while the New York Central was accumulating a profit of over $34,000,000, and that the annual deficits from passenger operations have increased from $5,436,000 iu 1936, the year preceding the year in which Applicant Young became associated with the Chesapeake & Ohio, to $7,810,000 in 1946, while the management of the New York Central was turning a deficit of $8,230,000 for 1936 into a profit of $1,250,000 for 1946. While refusing to accept the data showing these results, witnesses for the petitioners and applicants admit there is reason to doubt that the Chesapeake & Ohio normally earns any profit from its passenger operations. . . . A witness for the petitioners and applicants . . . admitted that the management of the New York Central is alive to the passenger problem, and referred to improvements being made and new equipment being ordered for its passenger service."

Sees Virginian Affected

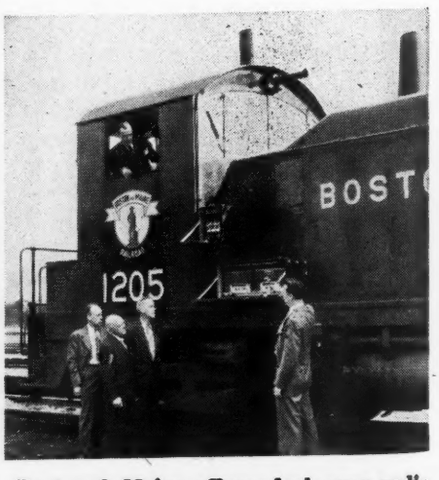
As Mr. Boles summarized his appraisal of it, the evidence as to benefits of C. & O.-N. Y. C. association indicated that the applicants had given only the "most general consideration" to problems which would have to be solved before such alleged benefits could be realized. He pointed out, for example, that the applicants "make no claim that they could do anything about labor conditions and taxes, which absorb a high percentage of gross earnings"; and "they hold out no hope for reducing terminal charges which, particularly in cities like New York and Cleveland, are burdensome."

The evidence as to the effect on the Virginian convinced Mr. Boles that there would be "little likelihood" that the route maintained by that road and the N. Y. C. via Deepwater, W. Va., would be continued "in full vigor." He went on to note that some traffic was expected to be diverted also from the Baltimore & Ohio, Pennsylvania, Wabash, Nickel Plate, and Erie. "The public," he added, "has just as much interest in the financial soundness of these railroads as it has in the financial soundness of the Chesapeake & Ohio and New York Central." Mention was also made of arguments for ultimate creation of a "strong" C. & O.-N. Y. C. system "capable of offering effective competition" to the P. R. R.-Norfolk & Western-Wabash system, such argument being in the record along with Applicant Young's references "to the Pennsylvania along with the New York Central as 'tottering on the brink.'"

As indicated above, Mr. Boles found that there is "substantial competition" between the C. & O. and N. Y. C. in some areas, and he also found that there are areas in which the interests of the two carriers "are otherwise in conflict." He set out the principles established by the commission in previous directorship cases, and found that the Young-Bowman proposals did not qualify for approval under such principles. As the proposed report put it, the applicants "would have the commission discard every principle it has established for determining what applications under section 20a(12) should be approved."

Mr. Boles next calculated that Mr. Young has an 0.000175 per cent interest in the assets of N. Y. C., considering his personal holdings and those of C. & O. which he controls through Alleghany. The assistant director also said that many factors over which Mr. Young could have no control would have a bearing on the financial rehabilitation of the Central.

"The chief difficulty of the New York Central and other eastern carriers which are suffering from a slump in earning power," the proposed report continued, "is their inability to widen the field between revenues at rates the traffic will bear and increased expenses due to higher costs of labor and materials." Meanwhile, Mr. Boles found the present Central management "fully aware of the importance of reducing the carrier's debt." He pointed out that a reduction of about $117,000,000 was effected during the 1938-46 period."



Boston & Maine officers look over radio equipment on a Diesel switcher

GENERAL NEWS

10 Months Net Income Totaled $364 Million

Net railway operating income for same period was $634,032,344

Class I railroads in the first 10 months of this year had an estimated net income, after interest and rentals, of $364,000,000, as compared with $162,000,000 in the corresponding period of 1946, according to the Bureau of Railway Economics of the Association of American Railroads. The 10-months' net railway operating income, before interest and rentals, was $634,032,344, as compared with $451,952,306.

Estimated results for October showed a net income of $48,000,000, as compared with $58,000,000 in October, 1946, while the net railway operating income for that month was $76,433,466, as compared with $85,255,053 in October, 1946. In the 12 months ended with October, the rate of return averaged 3.56 per cent compared with 2.8 per cent for the 12 months ended with October, 1946.

"Comparisons of railroad earnings for 1947 with those of 1946," the A.A.R. statement said, "should take into account the fact that the first six months of 1946 included a period of industrial disturbances, work stoppages and railroad wage increases, and railroad earnings were for that reason abnormally low."

Operating Revenues—Gross in the 10 months amounted to $7,121,942,053 compared with $6,332,501,516 in the same period of 1946, an increase of 12.5 per cent. Operating expenses amounted to $5,570,597,755 compared with $5,272,217,603, an increase of 5.7 per cent.

Thirty-two Class I roads failed to earn interest and rentals in the ten months of which 17 were in the Eastern district, 5 in the Southern region and 10 in the Western district.

Class I roads in the Eastern district in the 10 months had an estimated net income of $114,000,000 compared with $17,000,000 in the same period of 1946. For October, their estimated net income was $14,000,000 compared with $20,000,000 in October, 1946.

The same roads in the 10 months had a net railway operating income of $250,085,742 compared with $147,186,734 in the same period of 1946. Their net railway operating income in October amounted to $27,483,440 compared with $33,144,943 in October, 1946.

Gross in the Eastern district in the ten months totaled $3,252,327,429, an increase of 15.2 per cent compared with the same period of 1946, while operating expenses totaled $2,620,296,351, an increase of 8.3 per cent.

In the South—Class I roads in the Southern region in the 10 months had an estimated net income of $43,000,000 compared with $11,000,000 in the same period of 1946. For October, they had an estimated net income of $4,000,000 compared with $6,000,000 in October, 1946.

Those same roads in the 10 months of 1947 had a net railway operating income of $80,552,669, compared with $60,400,003 in the same period of 1946. Their net railway operating income in October amounted to $7,845,588 compared with $9,851,536 in October, 1946.

Gross in the Southern region in the 10 months totaled $979,420,078, an increase of 8.4 per cent compared with the same period of 1946, while operating expenses totaled $781,963,798, an increase of 3.4 per cent.

Class I roads in the Western district in the 10 months had an estimated net income of $207,000,000 compared with $136,000,000 in the same period of 1946. For October, they had an estimated net income of $30,000,000 compared with $32,000,000 in October, 1946.

Those same roads in the 10 months had a net railway operating income of $303,393,933 compared with $244,365,569 in the same period of 1946. Their net railway operating income in October amounted to $41,104,438 compared with $42,258,574 in October 1946.

Gross in the Western district in the 10 months totaled $2,890,194,546, an increase of 10.9 per cent compared with the same period of 1946, while operating expenses totaled $2,168,337,606 an increase of 3.5 per cent.

CLASS I RAILROADS — UNITED STATES

	Month of October 1947	1946
Total operating revenues	$794,165,231	$710,020,099
Total operating expenses	611,871,599	558,483,907
Operating ratio—per cent	77.05	78.66
Taxes	89,490,106	53,156,191
Net railway operating income (Earnings before charges)	76,433,466	85,255,053
Net income, after charges (estimated)	48,000,000	58,000,000
	Ten Months Ended October 31, 1947	
Total operating revenues	$7,121,942,053	$6,332,501,516
Total operating expenses	5,570,597,755	5,272,217,603
Operating ratio—per cent	78.22	83.26
Taxes	776,496,189	482,181,177
Net railway operating income (Earnings before charges)	634,032,344	451,952,306
Net income, after charges (estimated)	364,000,000	162,000,000

"El Capitan" Consist—Correction

The "Passenger Progress number" of *Railway Age* for November 15, page 233, stated incorrectly that the "El Capitan" of the Atchison, Topeka & Santa Fe includes tourist sleeping cars. This train is an all-coach, extra-fare streamliner, and does not carry sleeping cars of any type.

Two Fare Increases Approved by I. C. C.

Western Pullman fare will go to 3.5 cents per mile, N. H. coach rates to 2.875 cents

Western railroads have been authorized by the Interstate Commerce Commission to increase their fares for one-way travel in Pullman cars from 3.3 cents per mile to the 3.5-cents basis recently established in other territories, while the New York, New Haven & Hartford has been authorized to raise its 2.5-cents-per-mile coach fare by 15 per cent, bringing it up to approximately 2.875 cents per mile. The western adjustment will also involve increases in round-trip Pullman fares and excess-baggage charges to preserve their present percentage relationships to the basic one-way fare, while the intermediate-class fare for travel in tourist sleepers will go up from 2.7 cents per mile to 3 cents with a corresponding increase in the round-trip tourist fare.

The report in the western case (No. 29862) referred to railroad estimates that the authorized increases would yield additional annual revenues of approximately $7,133,390. The report in the New Haven case (No. 29827) said that road expected the higher coach fares to produce an additional annual gross of $5,300,000 which taxes would cut to a net yield of $2,911,000. Both reports were dated December 4 and made public December 8; they authorize publication of the increases on five-days notice. While the commission's approval was bottomed on the railroads' showing of increased expenses and passenger-service deficits, both reports referred to the new equipment on order, which, they said, would make railroad passenger service more attractive and thus increase its value to the public.

In the West—The adjustment of excess-baggage rates per 100 lb. in the West will make them 20.833 per cent of the new 3.5-cent Pullman fare—the same relationship they now bear to the 3.3-cent rate. Round-trip fares in Pullmans will likewise remain at 166⅔ per cent of the one-way rate, thus going up from 2.75 cents per mile to approximately 2.925 cents. Round-trip intermediate-class fares will remain at 180 per cent of the basic one-way rate as raised to 3 cents per mile, thus becoming approximately 2.7 cents per mile instead of 2.475 cents.

No one appeared in opposition to the western adjustment, and the report noted that it brings the basic Pullman fare in

(*Continued on page 71*)

Upholds State Taxes on Interstate Trucks

U.S. Supreme Court refuses to void Montana levies as burdens on commerce

"Motor carriers for hire, and particularly truckers of heavy goods, make especially arduous use of roadways, entailing wear and tear beyond that resulting from general indiscriminate public use," and a state is not required to permit such carriers to use its highway facilities "free of charge or indeed on terms equal with other traffic not inflicting similar destructive effects," the United States Supreme Court said in an unanimous opinion announced by Justice Rutledge on December 8. The court also took occasion to call attention to its previous rulings to the effect that, if a state tax on motor carriers does not discriminate against interstate commerce, "it is immaterial whether the proceeds are allocated to highway uses or others."

The decision affirmed a judgment of the Montana Supreme Court which had upheld two special taxes levied by that state against both intrastate and interstate carriers using its highways. Prior to July 1, 1941, the proceeds from both levies were credited to a "motor carrier fund" in the state treasury, but collections since that date have gone into the state's general fund. One of the taxes is a flat fee of $10 for each vehicle operated and the other a quarterly fee of one-half or one per cent of the carrier's "gross operating revenue," but with a minimum annual fee of $15 per vehicle for carriers designated class C. The appellant to the courts was an interstate carrier of that class—Aero Mayflower Transit Company, nationwide hauler of household goods and office furniture.

Flat Fee Charged—In upholding both taxes, the Montana Supreme Court interpreted the "gross operating revenue" levy as applying to "gross revenue derived from operations in Montana." In that connection, the state has sought to collect from Aero only the minimum annual fee of $15 per vehicle; and the state court disposed of contentions that the Montana gross revenue could not be determined by saying that in any event "no difficulty would arise in putting into effect the minimum fee." The U. S. Supreme Court accepted this as "a clear declaration" that the Montana court "would sustain the minimum charge even if for some reason the amount of the tax above the minimum would have to fall." And it refused to review the state court's interpretation of the state law.

With the issues thus narrowed, the U. S. Supreme Court had before it the validity under the Constitution's commerce clause of "two flat taxes, one for $10 and the other for $15." It found that neither "discriminates against interstate commerce," and that both apply "exclusively to operations within the state or the proceeds of such operations, although those operations are interstate in character." As to the contention that the taxes are invalid because the proceeds go into the state's general fund, the court said it "misconceives the nature and legal effect of the exactions."

"It is far too late," the court continued, "to question that a state, consistently with the commerce clause, may lay upon motor vehicles engaged exclusively in interstate commerce, or upon those who own and so operate them, a fair and reasonable, nondiscriminatory tax as compensation for the use of its highways. . . . Interstate traffic equally with intrastate may be required to pay a fair share of the cost and maintenance reasonably related to the use made of the highways.

A Privilege Tax—"This does not mean, as appellant seems to assume, that the proceeds of all taxes levied for the privilege of using the highways must be allocated directly and exclusively to maintaining them. . . . That is true, although this court has held invalid, as forbidden by the commerce clause, certain state taxes on interstate motor carriers because laid 'not as compensation for the use of the highways but for the privilege of doing the interstate business.'" Cases cited here included *Interstate Transit Lines, Inc., v. Lindsey*, 283 U. S. 183,186.

"Those cases," the court went on, "did not hold that all state exactions for the privilege of using the state's highways are valid only if their proceeds are required to go directly and exclusively for highway maintenance, policing and administration. Both before and after the *Interstate Transit* decision this court has sustained state taxes expressly laid on the privilege of using the highways, as applied to interstate motor carriers, declaring in each instance that it is immaterial whether the proceeds are allocated to highway uses or others. Appellant therefore confuses a tax 'assessed for a proper purpose and . . . not objectionable in amount,' that is, a tax affirmatively laid for the privilege of using the state's highways, with a tax not imposed on that privilege but upon some other such as the privilege of doing the interstate business."

In refusing to void the taxes on the basis of their amount, the court found the aggregate "less than that of taxes heretofore sustained." It also found it of "no consequence" that the state saw fit to lay two exactions rather than combine them into one. In view of all the facts, the opinion added "there is not even semblance of substance to appellant's contention that the taxes are excessive."

Kiefer Honored by A.S.M.E.

Paul W. Kiefer, chief engineer motive power and rolling stock of the New York Central System, has been awarded the A.S.M.E. Medal for 1947. The presentation was made at the dinner of the American Society of Mechanical Engineers on December 3 during the annual meeting held at the Chalfonte-Haddon Hall Hotel, Atlantic City, N. J. The A.S.M.E. Medal, established by the society in 1920, is presented for distinguished service in engineering and science. The award cites Mr. Kiefer as "an eminent engineer and executive and pioneer in the development of road-capacity testing of steam locomotives" and is made for "outstanding achievement in railway transportation."

Final Hearings Begin on Freight Rate Hike

Parmelee, Franklin emphasize the railroads' needs for additional revenue

Final hearings in Ex Parte 166, wherein the railroads are now seeking freight rate increases averaging 30 per cent, got under way in Washington, D. C., this week before Division 2 of the Interstate Commerce Commission. Commencement of the Washington proceedings marked the concluding phase of regional hearings which have been in progress since November 3, following the commission's order of October 6 authorizing an interim increase of 8.9 per cent. Oral argument on the carriers' petition is expected to start "as soon as practicable" when the present hearings end.

To Offset Costs—As reported in *Railway Age* of December 6, page 66, the railroads hiked their proposed advance in rates from an average of 27 per cent to 30 per cent in order to "offset rising costs resulting from higher wages and rules changes for operating employees." The modified proposal is now calculated to yield approximately $2,010,700,000 in additional annual revenues.

As at other hearings, Dr. Julius H. Parmelee, vice-president of the Association of American Railroads and director of its Bureau of Railway Economics, and Walter S. Franklin, vice-president, traffic, of the Pennsylvania, again were the principal witnesses for the carriers. In addition to their testimony, verified statements were filed by numerous railroad officers, including W. J. Kelly, traffic officer, A. A. R.; R. G. Hodgkin, freight traffic manager, Atlantic Coast Line; Joseph Marks, assistant freight traffic manager, Southern; W. W. Wolford, assistant freight traffic manager, Seaboard Air Line; N. E. White, assistant general freight agent, Illinois Central; and C. L. Butler, assistant freight traffic manager, Missouri Pacific.

According to Dr. Parmelee, the railroads' 1948 net income, on the basis of estimated traffic and with present rates, excluding the interim increase, would show a deficit of $313,300,000, or $71,000,000 more than he estimated when he appeared before the commission in hearings held in September. At the same time, he said that the carriers' net railway operating income, calculated on the same basis, would be $33,300,000 in 1948 and produce a rate of return on net investment of less than one-sixth of one per cent, as compared with 1.8 per cent if the interim increase remains effective throughout next year. The railroads have maintained that a 6 per cent rate of return is needed to keep them financially and physically sound.

Among the many exhibits introduced by the A. A. R. officer was one designed to show that the 1948 net income of 33 selected Class I roads, on the basis of rates and charges proposed in the modified petition, would amount to $953,900,000. This estimate is based on material prices and wage rates as of November 1 and on the

assumption that all operating employees will receive the same wage increases and rules changes as those accorded conductors and trainmen.

A $10 Billion Gross?—Using the same basis, Dr. Parmelee testified that the railroads' 1948 operating revenues would amount to $10,235,000,000, while the net railway operating income would total $1,283,200,000. As for individual rate territories, Dr. Parmelee's presentation disclosed that the 1948 net income would be $292,300,000 in the Eastern District; $90,400,000 in the Pocahontas Region; $126,500,000 in the Southern Region; and $444,700,000 in the Western District.

Dr. Parmelee's calculations, the result of estimates compiled by the individual roads and submitted to the bureau for consolidation and recapitulation purposes, aroused vigorous protests from counsel for protestant shippers, notably J. S. Burchmore, representing the National Industrial Traffic League; J. F. Finnerty, representing glass and zinc interests; and Parker McCollester, representing several automobile manufacturers and the American Newspaper Publishers Association. They contended in part that the estimates contained many "discrepancies" and, led by Mr. McCollester, eventually succeeded in procuring a commission ruling permitting shippers' counsel to crossexamine a railroad chief traffic officer from each of the rate territories with respect to the "factors" employed by the carriers in determining 1948 traffic and revenue estimates. The shippers' request was described as "dilatory" by Jacob Aronson, vice-president and general counsel of the New York Central and chief counsel for the petitioners.

The Diversion Question—According to Mr. Franklin, it is the "considered judgment" of the chief traffic officers that the additional increases that are now proposed will not result in any "appreciable diversion" of traffic. He said it was the unanimous view of the traffic officers that the additional increases "reflect a fair distribution of the additional expense which now confronts the carriers."

Questioned at length by Chairman Clyde B. Aitchison, Mr. Franklin testified that while the modified petition will not result in a rate of return of 6 per cent, it "goes as far as the railroads want to go at this time." If granted in full, he continued, it will enable the railroads to perform efficient transportation service without seeking additional increases in rates. Asserting that such rates should be increased "in accordance with other prices," Mr. Franklin said that the railroads, in computing their increased costs, attempted to be both "cautious and conservative."

Mr. Franklin also was interrogated with respect to statistics showing that many roads do not expect a net income deficit next year. In this connection, he emphasized that the proceeding was a "general rate case" and that all railroads must be considered as a system. At the same time, he testified that the Pennsylvania, the largest road in Official territory (in which rates would be increased by 41 per cent), would incur a net income deficit of $108,672,000 in 1948 on the basis of rates in effect prior to the interim decision. That figure, he went on, compares to a 1946 deficit of $8,530,317; a 1947 deficit of $8,144,200 on the basis of rates now in effect; and a 1948 deficit of $51,115,000 on the same basis. Approval of the modified petition, he told the commission, would give the Pennsylvania a 1948 net income of $38,230,000.

Burchmore Favors Increase—Mr. Burchmore, in his cross-examination of Mr. Franklin, conceded that the railroads are entitled to an increase greater than that authorized in the October interim order but should not receive the full advance which they are now seeking. "Just how much they should get, however, I don't know," he said, adding that the "economic" phase of the nation's transportation policy and the effect of working rules changes granted operating employees upon efficiency of operation are among the more important issues which should be considered by the commission in its final decision.

Another railroad witness, C. E. Huntley, secretary-treasurer of the American Short Line Railroad Association, testified that Class II and II roads will "probably earn" a rate of return of 5.45 per cent and 4.01 per cent, respectively, in 1947. These estimates, he added, however, do not include either the interim relief granted in October or the wage increases.

Among the protestants' witnesses, Dr. R. V. Gilbert, former economist for the Office of Price Administration, now representing the National Association of Railroad and Utilities Commissioners, contended that one-third of the nation's railroad mileage will go bankrupt "within the next four years" if the carriers' petition for increased rates is granted in full. In his opinion, he said, the railroads should receive an overall increase of approximately 5 per cent. The Eastern roads, he said, "need a bit more."

After declaring that he had sought to represent the railroads in Ex Parte 162 and the present proceeding, but had been rejected because "they wouldn't accept my advice," Dr. Gilbert said that the railroads, particularly the N. Y. C., Pennsylvania and New York, New Haven & Hartford, are managed inefficiently. The carriers, he continued, have failed to obtain new working capital because of their policy of paying high dividends and their lack of "gumption" to sell more securities. In response to the latter statement, Commissioner Mahaffie asked the witness how it is possible for an industry to procure new capital if it is not paying dividends on its securities. Dr. Gilbert said he knew of many such industries which are functioning successfully under such a policy, but declined to name any specific one.

Dr. Gilbert's Assumptions—"In establishing rates and charges the commission should, in my opinion, take account of the fact that the levels of production and employment in this country, and therefore the need for transportation service, will rise during the next several years substantially above the levels of 1948," Dr. Gilbert continued in part. "This will be the result of growing population, the large volume of investment in plant and equipment throughout the nation and the resulting increase in capacity and output.

"While the present inflationary dangers are great and, if permitted to continue unchecked, will lead to a sharp recession in prices, production and employment, the President has called upon Congress for measures to check inflation and avoid the consequent collapse. Furthermore, the government has assumed responsibility under the Employment Act of 1946 to take effective steps to counteract depression and to encourage maximum employment of our resources. Even, therefore, if in the future, action should fall short of purpose, there is still every reason to believe that production, with perhaps temporary interruptions, will move inevitably to higher levels."

In addition to explaining in detail the formulas he employed in arriving at his conclusions as to prospective railroad freight traffic and revenue—all of which were based on what he described as "varying assumptions" and economic trends—Dr. Gilbert charged that the "moribund" railroad industry could compete with other forms of transportation if railroad management would exert some "vitality" and invest sufficient funds to keep abreast of competition. The railroads, he asserted, have "not been in the market since the year 1." "Other industries go out and work for the money they make," he said. "They don't expect to measure earnings entirely out of increased rates and charges."

The witness also testified that the method of rate-making involving the establishment of a rate-making value and a fair rate of return is not a "particularly fruitful" method of determining utility rates and charges. "The determination of the revenues which are necessary to provide adequate transportation service is both more direct and more germane," he said.

Dr. L. H. Bean, Department of Agriculture economist, also testified that any substantial increase in freight rates would have a serious impact on the nation's price structure and act as a spur to the inflationary trend. He contended that a sharp rise in railrates at the present would "undoubtedly carry with it the possibility of a larger than normal diversion of available traffic to motor trucks." Dr. Bean also asserted that, if industrial production can be kept expanding towards levels more nearly corresponding to full employment requirements, the financial position of the railroads as a system would show an improvement. "The requested increases," he added, "appear excessive because . . . they would produce a disparity in relation to commodity prices and complicate the nation's effort to check the course of inflation."

In addition to the proceedings before Division 2, which has been supplemented by Commissioner Mahaffie and several cooperating state commissioners, two so-called "side-show" hearings are being conducted before commission examiners in order to accommodate many shippers desiring to testify.

Improved Schedule for "Golden State" Beginning January 4

The "Golden State," Diesel-powered streamliner operated by the Chicago, Rock Island & Pacific and the Southern Pacific between Chicago and Los Angeles, Cal., will be placed on a high-speed, extra fare schedule of 45 hours beginning on January

4, 1948. Coincident with the inauguration of the new schedule will be the addition to the train of new lightweight cars sheathed with stainless steel (described in *Railway Age* of November 22, page 28).

The westbound "Golden State," on its new schedule, will depart from Chicago at 10:15 p.m. and arrive at Los Angeles at 5:15 p.m. the second day, thereby reducing the present running time by 4 hr. 15 min. The equipment will depart from Los Angeles eastbound at 12:30 p.m. and arrive in Chicago at 11:30 a.m. on the second day, cutting 3 hr. 15 min. from the schedule now in effect. An extra fare of $10 for sleeping car passengers and $3.50 for coach passengers will be charged.

Because of unavoidable delays in receiving sufficient equipment necessary to operate the Chicago-Los Angeles "Golden Rocket"—which the Rock Island and Southern Pacific had planned to inaugurate this month—the roads are assigning to the "Golden State" the equipment which has been received for use on the new trains.

Ernest Murphy and A. L. Buxton Named to F. R. P. Council

Ernest Murphy, president of the Pressed Steel Car Company, has been named to the executive council of the Federation for Railway Progress to represent the federation's railroad supplier members. A. L. Buxton, president and a director of Kentucky Chemical Industries, Inc., Cincinnati, Ohio, has been appointed to the council to represent shipper members.

A.S.M.E. Railroad Division Installs New Officers

During two days of sessions sponsored by the Railroad Division at the annual meeting of the American Society of Mechanical Engineers, held December 1 to 5 at Atlantic City, N. J., the following new officers were installed to direct the activities of the division during 1948: Chairman, P. W. Kiefer, chief engineer motive power and rolling stock of the New York Central System; and vice-chairman, B. S. Cain, assistant engineer, Locomotive Division of the General Electric Company. Other executive committee members are J. M. Nicholson, mechanical assistant to vice-president of the Atchison, Topeka & Santa Fe; E. D. Campbell, consultant, American Car & Foundry Co.; K. A. Browne, research consultant, Chesapeake & Ohio; secretary, E. L. Woodward, western mechanical editor, *Railway Age*. Mr. Browne is the incoming new member of the Executive Committee whose term expires in 1952.

Three new members of the General Committee with terms expiring in 1952 include B. M. Brown, general superintendent motive power, Southern Pacific; F. L. Murphy, chief engineer, Pullman-Standard Car Manufacturing Company, and B. W. Taylor, assistant to vice-president, engineering, General Steel Castings Corporation.

At an all-committee meeting preceding the technical sessions, it was voted that the Railroad Division will participate with an all-day meeting on some appropriate subject, probably testing of passenger cars, during the semi-annual meeting of the society, May 30 to June 4, 1948, at Milwaukee, Wis. Tentative plans were also set up for a two-day session of the Railroad Division during the next annual meeting of the society, November 28 to December 3, 1948, at New York.

During the Locomotive Forum, which occupied morning and afternoon sessions on December 3, a paper was presented by Dr. M. M. Loubser, chief mechanical engineer, South African Railways, Pretoria, South Africa, entitled "The South African Railways from a Mechanical Engineer's Aspect."

A number of members of the Railroad Division were honored in the course of the society's meeting at Atlantic City. During the annual dinner Mr. Kiefer received the A. S. M. E. Medal for 1947, presented for distinguished service in engineering and science. At a Railroad Division luncheon in honor of Messrs. Loubser and Kiefer on December 3, the following were made fellows of the society: J. R. Jackson, mechanical engineer, A. A. R., Mechanical Division; D. S. Ellis, vice-president, Lima-Hamilton Corporation; B. S. Cain, assistant engineer, Locomotive Division, General Electric Company; L. B. Jones, engineer of tests, Pennsylvania; L. E. Endsley, consulting engineer, Pittsburgh, Pa.; R. G. Henley, general superintendent motive power, Norfolk & Western, and C. B. Peck, mechanical department editor, *Railway Age*. Certificates were presented by E. W. O'Brien, president of the society.

Lower Railroad Taxes or Raise Industry's, Says Brown

While industry pays 1 per cent social security insurance and an average of 1½ per cent unemployment insurance on its payroll the railroads have a tax of 8¾ per cent on their payroll for the same purpose, R. W. Brown, president of the Reading, said in Philadelphia, Pa., on December 5 in an address before the University of Pennsylvania Engineering Alumni Society. Mr. Brown said his only reason for calling this fact to the attention of his audience was his belief that either the railroads' tax rate must be reduced or that of industry increased.

"When legislative bodies enact a law affecting the railroads they levy a tax to cover that law," he continued. "As a rule this tax is paid by the railroads themselves. Over recent years we have been piling tax burdens upon the railroads by leaps and bounds. At the same time we have been using tax funds to subsidize other forms of transportation—air, highway and water—competitors of the railroads. As a result the railroads today are on the defensive as a private enterprise. There is government ownership of railroads in Europe and Asia, even in the British empire, where private enterprise has stood firmly for more than a century. Ninety-five per cent of the railroads in Australia and New Zealand; 81 per cent in South Africa and 55 per cent in Canada are government-owned. . . . This country, with its great railroad system, stands out as the last line of defense for private enterprise in transportation. Make no mistake! If American railroads ever pass to government ownership, other forms of transportation will travel the same road. Other industry will naturally follow. It could not be otherwise. Nobody can compete with government."

Whether the American people like it or not, we are at the crossroads, Mr. Brown concluded. "The chips are down. We must determine where we go from here. If we really want free enterprise, we must preserve it. The only way to preserve it is to permit business to earn enough to pay its way—and pay its way in full."

American Brake Shoe Opens Two New Foundries

The American Brake Shoe Company's two new non-ferrous foundries recently completed at Niles, Ohio, and Meadville, Pa., were opened on December 8 and 9, respectively, it has been announced by Thomas W. Pettus, president of the firm's National Bearing division. The new Meadville plant will produce bronze bearings and castings. It will specialize in copper, brass and bronze for railroads, steel mills and other industries and in precision machine bearings for Diesel engines. The new foundry at Niles will manufacture railroad journal bearings.

Overcharging Claim "Ridiculous," Says E. E. Norris

A little-known fact about the railroads' war job is that they neither asked for nor received one penny from the government for the necessary expansion of their facilities to handle war traffic, Ernest E. Norris, president of the Southern, said in an address before the Cincinnati (Ohio) Chamber of Commerce forum on December 9. The government poured countless millions into the expansion of other industrial facilities, he added, while during the six years 1940-1945 the railroads spent $3,000,000,000 out of their own pockets for additions and improvements to their property.

Although fishing for catfish from the "Queen Mary's" upper decks is said to be the height of ridiculousness, Mr. Norris went on, it is no more ridiculous than the current "fishing expedition" of the Department of Justice in the matter of alleged overcharges on the handling of government freight during the war. "Early in the war, at the request of the director of the Office of Defense Transportation, and after written approval of the Department of Justice," he continued, "a committee of traffic officers was set up to negotiate reduced rate requests by government agencies. Compared with commercial rates, reductions aggregating more than half a billion dollars were made in freight charges on war traffic. . . . In addition, land grant reductions on government traffic during the war years are estimated by government authorities at $800,000,000. Furthermore, through heavy wartime taxation rates, the government already has received up to 85½ per cent of the railroads' taxable income. Now it wants the remaining 14½ per cent. The simple truth is that, during the war, the railroads' increased operating costs, coupled with heavy income and excess profits taxes, not only

prevented excessive earnings, but actually operated to deny the railroads a fair return in a time of unprecedented business."

Railroads have performed one miracle of transportation after another, Mr. Norris said, but stretching the shrinking railroad dollar to cover greatly increased and increasing operating costs is one miracle they frankly admit they cannot perform by themselves. On that they need the help of the people they serve and of the federal and state authorities whose duty it is to see that railroad earnings are adequate to keep railroads in condition to handle at all times the peak loads of commerce and the national defense.

Norfolk Southern Asks to Drop All Passenger Business

The Norfolk Southern has filed a petition with the North Carolina Utilities Commission requesting authority to eliminate all passenger cars on main-line trains between Norfolk, Va., and Raleigh, N. C. Operation of the trains would be continued, but only for mail and express service. If the petition is granted, the road will be completely out of the passenger-carrying business.

Young Says Eastern Presidents' Group Antagonizes Labor

The Chesapeake & Ohio will make no further contribution to the advertising budget of the Eastern Railroad Presidents Conference because the railroad is convinced "that the activities of this group have tended to injure labor-management relations," Robert R. Young, chairman of the C. & O., said recently in letters written to the leaders of all the railroad labor organizations. In his letter Mr. Young said the decision was made because "it seems to us that the solution of the railroads' problems is not in antagonizing labor but in working shoulder to shoulder with labor in improving the financial, physical and human assets of the railroads." The C. & O. will remain a member road in the E.R.P.C.

Two Fare Increases Approved by I. C. C.

(*Continued from page 67*)

the West into line with those in other sections of the country. It also stated that the western roads incurred a "substantial" passenger-service deficit in 1946 and anticipated a "much greater" one for 1947. The rising costs of labor, fuel, and materials and supplies were next mentioned along with the decline in passenger traffic since 1944, the commission then observing that "it is not possible to reduce passenger expenses in direct relation to reduction in revenue."

A table in the report indicates that, representative one-way Pullman fares from Chicago will be increased as follows: To St. Paul, Minn., from $13.08 to $13.67; To Omaha, Nebr., from $16.43 to $17.43; to Denver, Colo., from $34.17 to $36.24; to Seattle, Wash., from $70.77 to $75.06; to San Francisco, Cal., from $73.18 to $77.61. Of the estimated $7,133,390 in additional annual revenue, $2,263,197 and $2,788,383, respectively, would come from the higher Pullman one-way and round-trip fares; $1,669,024 and $307,100, respectively, from the tourist one-way and round-trip fares; and $105,686 from excess-baggage charges.

Where Laws Fix Maxima—As to intrastate fares, the report granted that part of the railroad petition which asked that outstanding commission orders be modified to permit the increases in those states where such orders now hold the intrastate fares to the interstate level. The states involved are Illinois, Iowa, Michigan, Minnesota, Montana, Nebraska, North Dakota, Texas and Wisconsin. The report said that all those states except Wisconsin "have statutory maxima ranging from 2 to 3 cents per mile so that in no event would the regulatory bodies thereof have jurisdiction to authorize an increase in the intrastate fares in their respective states to a higher basis." Meanwhile, "no question" was raised as to the modification of the outstanding orders.

The report in the New Haven case was by Commissioner Rogers, who noted that this road is not only incurring passenger-service deficits but the 10 per cent emergency freight-rate advance which became effective October 13 will yield it an increase of only about 5 per cent in gross, because "about half" of its expenses and revenues are related to passenger service. A table in the report indicated that the New Haven's current expenses and payroll taxes, on an annual basis, are about $25,760,000 above the January 1, 1946, level, while the annual-basis yield from previous rate and fare increases of the past 12 months will be only $21,255,000. The prospective 1947 deficit from passenger-train operations was shown at $4,705,000 and the prospective 1948 deficit at $9,742,000.

Pointing out that about 70 per cent of the New Haven's passenger-fare revenue is derived from coach fares, Commissioner Rogers calculated that the 15 per cent increase in such fares will be equivalent to an increase of about 10 per cent in the road's total fares. He concluded that if the deficit from passenger business were to be substantially reduced, the relief must come in the form of higher coach fares. "No increase in the commutation and first-class fares would be practical at this time, among other reasons, because the commutation fares and fares for Pullman accommodations have just recently been substantially increased," the report also said.

The New Haven Case—"The coach service," it continued, "encounters competition principally from the private automobile and to some extent from the common carrier bus. Prices of automobiles have increased about 70 per cent since 1939 and gasoline about 50 per cent. The prevailing fare for the bus lines in New England is 2.5 cents per mile. This has resulted for the class I intercity bus lines in that region, for the first quarter of 1947, in an average operating ratio of 106.6 per cent which is much higher than in any other territory.

"Southern New England is a compact densely populated area with many relatively large communities and there is much commercial travel as well as visiting to and fro between relatives and friends in the various communities, all of whom are actual or potential customers for the coach service. To meet this demand, 200 units of passenger equipment are being acquired, including 103 modern passenger coaches which are being delivered at the rate of about five or six per month. This will make the coach service more attractive to the traveler, especially where the demand is the heaviest.

"It is the judgment of the New Haven's officials that under the circumstances the proposed increased coach fares will result in little, if any, diversion of the traffic. That their judgment is reliable is shown by the fact that early in 1947 they estimated a decline in passenger traffic of 15 per cent while the actual decline based in experience up to date will be about 13.7 per cent."

The adjustment will increase representative one-way coach fares from New York as follows: To New Haven, Conn., from $1.80 to $2.07; to Hartford, from $2.75 to $3.16; to New London, from $3.10 to $3.57; to Providence, R. I., from $4.70 to $5.41; to Boston, Mass., from $5.75 to $6.61.

Both reports noted that Chairman Aitchison, "being necessarily absent," did not participate in the disposition of the proceedings.

Says Canada Needs More People and More Railroads

An immediate and sound flow of immigration to Canada is as essential to that nation's future, said W. M. Neal, chairman and president of the Canadian Pacific, in an address before the Canadian Railway Club, in Montreal on December 9.

Canada's "tremendous wartime industrial expansion" increased urban concentrations of manpower and drained the supply of labor for raw material production past the danger point, Mr. Neal said, and "we are naturally anxious to maintain the industrial position which we have established and expand it still further. To do this we must have more agricultural workers and more woodmen, miners and men who are willing to go beyond our present limited frontiers in the north and northwest to capitalize upon the vast wealth which lies there and without which our present industries cannot continue to progress."

The transportation industry of Canada was designed to handle a far greater volume of business than now presents itself and would welcome a greater population in Canada, Mr. Neal said, but rigid control of transport revenues, particularly those of the railroads, has taken little or no account for many years of inevitable and uncontrollable cost increases.

"There are many in Europe who are ready and eager to contribute to the era of expansion Canada faces," Mr. Neal said. From his visit last summer to the northwest areas above Edmonton which were then just being opened up, he concludes that present water and air transport will not meet the needs of the future and the railways eventually must find their way farther north. Here alone, he ob-

served, was a project calling for employment of large numbers of strong and adventurous men.

Such a future, Mr. Neal said, applies as forcibly to every outlying section of Canada, and possibilities of mineral and other development are abundant in the north country of Manitoba, Ontario and Quebec and in the Maritime Provinces, and there are farm lands in the three prairie provinces requiring only clearing and settlement.

Young Says Rail Labor Should Get Another Increase

The latest demands of the railroad labor organizations for increased wages are completely justified, Robert R. Young, chairman of the Chesapeake & Ohio, said at a press conference in Dallas, Tex., on December 6. "As long as living costs continue to skyrocket," he added, "labor has every right to higher wages. It's not only right but necessary. Prices are going to spiral upward as long as we try to feed the world. It is folly to think that 8 per cent of the world—that's us—can feed the other 92 per cent. It just can't be done and we should quit trying."

Mr. Young said also that private enterprise can prevent another depression, which he fears this nation, as it is now constituted, cannot survive, by guaranteeing workers an annual wage. The C. & O. is working on such a plan, he continued, adding that if private enterprise does not do it the government will, sooner or later. He expressed disbelief in the argument that only a depression can lower prices, saying that the answer lies in "higher production and lower living costs, and, of course, abandonment of the administration's plan to feed the world." Lower prices would increase the general prosperity of the country, he concluded, and lower taxes, when brought about, will give businessmen the incentive to increase production and thus help to reduce living costs.

Assert Anti-Trust Aid Would Promote Car Building

Legislation assuring the steel and car-building industries of immunity from prosecution under the anti-trust laws would help "materially" in connection with the present undertaking to reach freight-car production goals on a cooperative basis, according to a presentation made last week before a Senate judiciary subcommittee by two members of the Office of Defense Transportation's staff—Robert L. Glenn, director of the Manpower and Materials Division, and F. A. Silver, general counsel. They appeared in support of Senate bill 1807 which would extend from February 29, 1948, until June 30, 1949, various remnants of the Second War Powers Act, including President Truman's authority to allocate the use of railroad transportation equipment and facilities.

This power has been delegated by the President to O.D.T. In advocating its extension, Mr. Silver suggested the desirability of an amendment which would make it clear that private cars are covered as well as railroad-owned cars. He conceded that there has been no great difficulty on that score, and that O.D.T.'s authority is unquestioned once a private car enters the stream of commerce; but he noted that its authority to order into service a private car used for storage has been questioned. This matter would be taken care of under another Senate Bill, S.1818, whereby Senator Reed, Republican of Kansas, proposes to deal with the transport-allocation power separately, extending it to January 31, 1949, and to railroad equipment and facilities "without regard to ownership."

"Voluntary" Plan's Weakness—The discussion of the anti-trust situation came in response to questions from the subcommittee's chairman, Representative Cooper, Republican of Kentucky, who was undertaking, he said, to determine whether "voluntary" allocation arrangements would work. President Truman has asked for authority to allocate for domestic use "scarce commodities . . . which basically affect industrial production." Presumably, this would include steel, but that proposal was not involved in the bill under consideration by the subcommittee.

"Voluntary allocation," Mr. Glenn told Chairman Cooper, does not "entirely" meet present requirements, because there has been "some difficulty" in connection with attaining a balanced distribution of the total tonnage among individual car builders and the railroad shops. Seemingly, however, the principal difficulty has been the uncertain anti-trust situation, the only present "immunity" being a "provisional agreement" with the Department of Justice. As Mr. Glenn explained, that agreement permits committees of the builders, steel companies, and manufacturers of component parts to confer with each other under O.D.T. supervision.

Law a "Brake" — Chairman Cooper suggested that private industries in such meetings "must be aware of the fact that they are under the anti-trust act." Mr. Silver agreed, saying they are "very conscious of it," and that situation "has acted as a brake." He also agreed with Chairman Cooper's observation that the "voluntary clearance" granted by the Department of Justice was no guarantee against prosecution. The O.D.T. pointed out, however, that legislative immunity from anti-trust prosecution would not enforce any agreements, and thus the parties purporting to cooperate would still have to meet their commitments as a matter of "good faith."

Chairman Cooper then asked if the agreements had not been carried out thus far, and Mr. Silver made this reply: "The allocations of the steel people, I understand, have been carried out; but we have not been able to channel them into the points of need at the time they were needed, and to the types of cars being constructed." Along the same line, Mr. Glenn had previously said that there has been "no difficulty" from the standpoint of allocation of steel by the steel industry, but it has not always been possible to maintain a "steady flow" of the right materials to each builder.

Meanwhile, Messrs. Glenn and Silver had presented and discussed data on freight-car production, retirements, shortages, and the level of traffic. They reported generally that the situation had become "more critical" in recent months, and that "it may not reasonably be anticipated" that this situation will be overcome "for an indefinite period."

"Until the supply-demand situation with respect to domestic freight cars can be brought into reasonable relationships," Mr. Silver said, "it is necessary that those government controls, which have in the past, with the cooperation of shippers and railroads, attained a degree of efficient utilization of available freight cars unmatched in the history of railroading," he continued. Later on, he told Chairman Cooper that operations under outstanding O.D.T. minimum-loading and port-traffic-control orders have been "highly successful."

The 1948 Program—In his detailed discussion of the car-building situation, Mr. Glenn told of the new arrangement with the steel industry whereby it is hoped that January will see achievement of the 10,000-car production goal and the return to service of 3,500 to 4,000 bad order cars (see *Railway Age* of November 29, page 52). He also told of the recent conference at the White House, where O.D.T. Director J. Monroe Johnson as Mr. Glenn put it, "received the authority and the suggestion from President Truman to initiate as quickly as possible an increase in new car production to bring it up to 14,000 cars a month." As reported also in the article appearing on page 52 of the November 29 issue, information previously made available by O.D.T. had put the White House goal at 15,000 cars a month. After Mr. Glenn had used the 14,000-car figure in his testimony, it was explained at O.D.T. that the White House discussions had been on a 14,000-to-15,000 basis with emphasis on a minimum need for 14,000.

The latter was the monthly "minimum" recommended in the report on "European Recovery and American Aid," which President Truman received recently from a committee headed by Secretary of Commerce Harriman. That committee also recommended "allocation" of steel for the program "as a matter of highest priority" if adequate supplies could not be delivered under present voluntary arrangements (see *Railway Age* of November 15, page 240).

To Near Plant Capacity—Mr. Glenn told the Senate subcommittee that O.D.T. hopes to meet soon with the steel industry and other interested parties to ask for a larger allotment of steel to make the 14,000-car program effective in the second quarter of 1948. He estimated that it would require delivery of another 75,000 tons monthly, and it is O.D.T.'s idea to seek that increase, beginning with the April, 1948, rollings. It was Mr. Glenn's opinion that 14,000 cars a month would be "pretty near the total capacity of the car plants."

While the O.D.T. officers said that the use of materials to fill export orders for cars had perhaps diverted steel from domestic orders in the early part of this year, they conceded that this situation is now under control. Freight cars were placed under export control by the Department of Commerce's Office of International Trade on June 30, and Mr. Glenn pointed out that O.D.T. has representation on O.I.T.'s review committee. He added that "there have been no export licenses issued that we disapproved of." However, Mr. Glenn explained that O.D.T. "from the be-

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but WAITING FOR RE-ASSIGNMENT!

The modern steam locomotive was designed to be a high revenue producer. The engineers that design them use all their skill to make possible a high monthly mileage. The railroads that buy them count on this mileage. Yet the locomotive's potential money making capacity is often stymied because scheduling has not been revised to take full advantage of the improvements in steam locomotive design.

Modern steam locomotives are more efficient because they can haul heavier payloads at higher sustained speeds. Study the availability of your modern power. Streamline schedules to use this power to the fullest. Operating results will prove that modern steam power, given the chance, is more than capable of meeting today's and tomorrow's traffic demands.

LIMA HAMILTON CORPORATION

LIMA, OHIO
Lima Locomotive Division
Lima Shovel and Crane Division

LIMA-HAMILTON CORPORATION

HAMILTON, OHIO
Hooven, Owens, Rentschler Co.
Niles Tool Works Co.

ginning" opposed the filling of large French orders, which, he said, involved 35,000 to 40,000 cars; but it "withdrew" its objections when the cars were on the docks ready for shipment abroad. Chairman Cooper said, and Mr. Silver agreed, that the Commerce Department could have prevented the export of these cars to France by having had freight cars on O.I.T.'s export-control list of the time. Meanwhile, Mr. Glenn pointed out that the French cars were smaller than those used here, and thus the steel which went into them would have been sufficient for the building of only about 20,000 cars for domestic service.

E. E. R. Tratman Dies

E. E. R. Tratman, retired associate editor of Engineering News-Record and author of "Railway Track and Maintenance," died at his home at Wheaton, Ill., on November 30. Educated in England as a civil engineer, Mr. Tratman came to the United States in 1884. He was the author of numerous articles and papers on track and track work, serving as special agent for the federal government to report on metal and wood railroad ties in the 1890's. Mr. Tratman joined the editorial staff of Engineering News Record in 1886 and retired therefrom in 1932.

Freight Car Loadings

Revenue carloadings for the week ended December 6 totaled 878,588 cars, the Association of American Railroads announced on December 11. This was an increase of 86,249 cars, or 10.9 per cent, over the previous week, an increase of 149,504 cars, or 20.5 per cent, over the corresponding week last year and an increase of 102,212 cars, or 13.2 per cent, above the comparable 1945 week. Loadings in 1946 were affected by a strike in the coal mines.

Loadings of revenue freight for the week ended November 29 totaled 792,339 cars, and the summary for that week as compiled by the Car Service Division, A. A. R., follows:

Revenue Freight Car Loading

For the Week Ended Saturday, November 29 District	1947	1946	1945
Eastern	144,193	130,140	151,604
Allegheny	168,028	137,774	168,181
Pocahontas	61,195	21,791	56,326
Southern	126,862	110,811	128,399
Northwestern ..	99,577	88,487	94,544
Central Western	128,254	114,356	136,492
Southwestern ..	64,230	57,552	68,228
Total Western Districts	292,061	260,395	299,264
Total All Roads	792,339	660,911	803,774
Commodities:			
Grain and grain products	43,851	46,848	58,810
Livestock	13,797	17,566	25,078
Coal	173,085	52,563	179,764
Coke	14,744	8,998	13,510
Forest products	40,697	39,258	33,011
Ore	34,992	22,327	14,767
Merchandise l.c.l.	103,357	117,330	116,905
Miscellaneous ..	367,816	356,021	361,929
November 29 ..	792,339	660,911	803,774
November 22 ..	902,672	806,593	716,556
November 15 ..	878,337	917,124	800,534
November 8 ..	910,160	913,345	838,218
November 1 ..	940,746	922,312	851,962
Cumulative total, 48 weeks	41,339,115	38,319,291	39,176,328

In Canada.—Carloadings for the week ended November 29 totaled 85,522 cars as compared with 86,520 cars for the previous week and 78,033 cars for the corresponding week last year, according to the compilation of the Dominion Bureau of Statistics.

	Revenue Cars Loaded	Total Cars Rec'd from Connections
Totals for Canada:		
November 29, 1947 ..	85,522	37,172
November 30, 1946 ..	78,033	36,897
Cumulative totals for Canada:		
November 29, 1947 ..	3,655,716	1,772,288
November 30, 1946 ..	3,407,043	1,659,176

New B. & O. Coal Dock Almost Completed

The new $4,000,000 coal dock of the Baltimore & Ohio at Lorain, Ohio, virtually completed after 19 months of work, is being test-operated and will be ready for general service at the opening of the 1948 shipping season on the Great Lakes. The two piers of the facility are 1,100 ft. long and lie within the breakwater of Lake Erie, adjacent to the mouth of the Black River. Capable of accommodating the largest coal boats on the lakes, the slip between the piers is 22 ft. deep.

Both piers are provided with water, compressed air and electric current outlets for vessels tied up at them and there are flood lights on the piers and yards. Administration, shop and storage buildings, which also offer accommodations for the personnel of ships at the dock, have been constructed. To assure efficiency in operation, as well as complete coordination between the supervisor of the coal dumper, the tower operator and the operators of the electric "pusher" locomotives which move the cars up to the dumping ramp, two-way voice radio has been provided. This system is supplemented by telephones and loud speakers.

October Truck Traffic

Motor carriers reporting to American Trucking Associations transported in October 2,731,407 tons of freight, an increase of 13.5 per cent over the 2,407,236 tons transported in September and an increase of 18.7 per cent over the 2,300,977 tons hauled in October, 1946. The A.T.A. index, based on the 1938-40 average monthly tonnage of the reporting carriers, was 245, "an all-time peak."

The October figures, according to A.T.A., are based on comparable reports from 256 carriers in 41 states. Truckers in the Eastern district reported tonnage increases of 13.1 per cent over September and 18.8 per cent over October, 1946. Carriers in the Southern region reported respective increases of 20.7 per cent and 32.6 per cent, while those in the Western district reported respective increases of 11.8 per cent and 14.6 per cent.

Mexico Gets $7 Million Credit for Rail Improvements

A credit of $7,000,000 recently made available by the Export-Import Bank to Nacional Financiera, S. A., a financial agency of the Mexican government, will be used to finance purchases in this country of materials and equipment, principally rails and accessories, for the Mexican National Railways. The equipment will be used in improving various lines and particularly in changing to standard gage the existing narrow-gage line between Mexico City and Vera Cruz. The credit will be available until June 30, 1948.

Temporary Injunction Issued in Negro Firemen's Case

At the suggestion of counsel for the Atlantic Coast Line and the Southern, Justice Alexander Holtzoff has applied against those roads, as well as the Brotherhood of Locomotive Firemen & Enginemen, the temporary injunction he has issued to prohibit further adherence by the union and managements to a 1941 agreement which a group of negro firemen is assailing as discriminatory on the basis of allegations that it has deprived them of preferred firemen positions to which their seniority on the firemen's roster would otherwise entitle them. As noted in the *Railway Age* of December 6, page 75, Justice Holtzoff had previously announced that the injunction would run only against the B. of L. F. & E., "because the complaint shows that the brotherhood was instrumental in securing such discriminatory action on the part of the railroads."

N. Y. C.-B. & O. Coal and Ore Facility Ready by Spring

The $18,500,000 coal- and ore-handling facility being built jointly by the New York Central and the Baltimore & Ohio will be opened at Toledo, Ohio, next spring, it was announced this week. The new docks, located on Maumee Bay, will have a capacity for handling 20,000,000 tons of coal and 4,500,000 tons of ore a year, and will be operated by the Lakefront Dock & Railroad Terminal Co., owned jointly by the two roads. Included in the facility will be a large railroad yard with 56-mi. of track and a capacity of 5,400 cars and nine smaller "supporting" yards for the coal dumpers and ore-handling machines with capacities of 110 to 250 cars each. Announcement by the two roads of their intention to construct the facility was reported in the *Railway Age* of July 14, 1945, page 80.

The new facility will have three piers and three slips and will be adequate to serve three coal boats and one ore boat at all times. The slips between and alongside the piers will provide room for 21 vessels during the winter mooring season and will have a depth of 24 ft. Facing Lake Erie, the docks have a 24-ft. deep maneuvering basin with an average length of 2,200 ft. and a width of more than 600 ft. The basin is adjacent to the 500-ft wide shipping channel. In addition to the coal and ore machines, the dock yard includes a number of power sub-stations, utility and storage buildings, an office building, a machine shop, a trainmen's building, a car repair and storage building, as well as coal, water, sand and cinder-handling facilities for steam locomotives.

Representation of Employees

The Brotherhood of Railroad Trainmen has supplanted the Order of Railway Conductors as collective-bargaining representative of yardmen employed by the Aliquippa & Southern and ticket collectors employed by the Pittsburgh & Lake Erie, according to results of recent elections which have been certified by the National Meditation Board. While it treated the P. & L. E.

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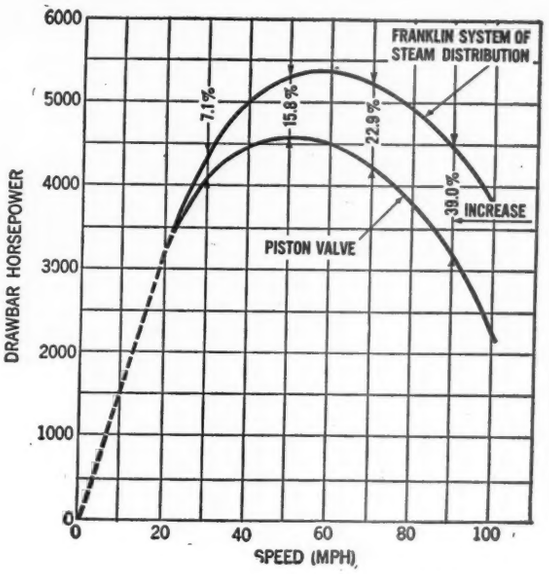
MORE POWER



This curve shows a comparison of horsepower at rear of tender for a modern locomotive when equipped with piston valves and when equipped with the Franklin System of Steam Distribution. In both cases, steam consumption by the engine is 90,000 lbs. per hour.

Computations based on:

Type 4-8-4

Cylinders 25" x 32"

Driving Wheels 80"

Boiler Pressure 300 lb

Steam Temperature 730° F

Total Heating Surface 4225 sq ft

Grate Area 100.2 sq ft

from a locomotive equipped with the Franklin System of Steam Distribution

This curve shows the improvement in horsepower output that may be expected from a modern locomotive when it is equipped with the Franklin System of Steam Distribution.

FRANKLIN RAILWAY SUPPLY COMPANY, INC.

NEW YORK • CHICAGO • MONTREAL

STEAM DISTRIBUTION SYSTEM • BOOSTER • RADIAL BUFFER • COMPENSATOR AND SNUBBER • POWER REVERSE GEARS
AUTOMATIC FIRE DOORS • DRIVING BOX LUBRICATORS • STEAM GRATE SHAKERS • FLEXIBLE JOINTS • CAR CONNECTION

ticket collectors as a separate craft for purposes of the latter case, the board said that such procedure "does not establish a precedent or prelude ultimate determination in any future dispute as to the proper classification of ticket collectors for representation purposes."

The B. of R. T. has also been chosen as represenetative of Chicago, Indianapolis & Louisville dining car stewards who were previously without representation. In other recent elections the United Transport Service Employees of America, Congress of Industrial Organizations, supplanted the Brotherhood of Sleeping Car Porters as representative of train porters, maids and attendants employed by the Louisville & Nashville, and defeated the challenging Brotherhood of Railway Clerks, thus retaining its right to represent clerical, office, station and storehouse employees of the Savannah Union Station. Meanwhile, the B. of S. C. P. supplanted the Colored Trainsmen of America as representative of Texas & New Orleans train porters; the Railway News Service and Sales Employees No. 24242, American Federation of Labor, was certified as representative of the previously-unrepresented news agents of the Atchison, Topeka & Santa Fe's Fred Harvey Service, Inc.; and the Brotherhood of Railroad Signalmen extended its coverage of Cincinnati, New Orleans & Texas Pacific signal department employees to include signal foremen.

Having defeated the challenging Brotherhood of Railroad Trainmen by one vote (33 to 32), the Order of Railway Conductors has retained its right to represent road conductors employed by the Chicago, Indianapolis & Louisville, according to results of a recent election which has been certified by the National Mediation Board. In another recent election, the Brotherhood of Sleeping Car Porters retained its right to represent Baltimore & Ohio train porters, maids and attendants, having defeated the challenging United Transport Service Employees, Congress of Industrial Organizations.

Internal Revenue Code Revision Proposed by Railroads

The House ways and means committee was urged last week to recommend the adoption of legislation amending the Internal Revenue Code so as to permit tax relief to the railroads with respect to land grant deductions and government reparation awards. Testimony outlining the amendment, designed to make the railroads account only for the actually realized income and to prevent the taxation at wartime rates of large amounts of "paper income" which was "never actually realized by the carriers," was offered the committee by J. F. Mann, general counsel of the Union Pacific, and chairman of the Association of American Railroads' subcommittee on federal revenue legislation.

According to Mr. Mann, the legislation would provide for restatement of taxable income for the years involved to reflect the net amount received. Noting that it is "not clear" under existing rulings that the "high wartime taxes" paid by the carriers on the amount repaid to the government will be "correspondingly adjusted," he told the committee that "under certain decisions, the only offset would be a deduction in the year of repayment which, in many instances, was a lower tax year."

Mr. Mann explained that the government initially paid the wartime railroad bills as rendered, but that the carriers, because of an adjustment of the charges, "have been and are paying back to the government many millions of dollars." At the same time, he observed that although land grant deductions were abolished by statute as of October 1, 1946, the comptroller general has not as yet completed the audit of the "vast accumulation" of bills for traffic moving prior to that date.

According to the U. P. officer his proposal would provide that a carrier may at its option restate its income for the year of the original charge and treat as income of that year only the net amount finally determined to be due for handling the shipment. It also is drafted in such a manner as to give the carrier the option of relating the adjustment back to the year of the original charge or of accounting for it in the year in which the adjustment is made.

Mr. Mann said that a "serious inequity results" if the amount originally billed is subjected to the excess profits tax with the only offset a deduction of the cut-back in a later year when no excess profits tax is applicable.

Equipment and Supplies

LOCOMOTIVES

The Chesapeake & Ohio has ordered 30 steam switching locomotives of the 0-8-0 type from the Baldwin Locomotive Works, at a cost of $3,400,000. Delivery of the engines will start in June, 1948. The C. & O. also has ordered 15 Mallet locomotives of the 2-6-6-6 type from the Lima-Hamilton Corporation, at a total cost of $5,800,000. Delivery of these locomotives is scheduled for next July.

The Chicago, Burlington & Quincy has ordered 21 Diesel-electric locomotives from the Electro-Motive Division of the General Motors Corporation as follows: 4 2,000-hp. and 1 4,000-hp. passenger locomotives and 15 6,000-hp. and 1 4,500-hp. freight locomotives. With the exception of 9 2,000-hp. Diesel-electric road-switching locomotives, this purchase includes all the motive power recently authorized by the road's board of directors, as reported in last week's *Railway Age*.

The Chicago Great Western has ordered 26 Diesel-electric locomotives of the following types: eight 1,500-hp. switchers from the American Locomotive Company, and five 1,000-hp. switchers, nine 2,000-hp. road-switchers and four 3,000-hp. passenger locomotives from the Electro-Motive Division of General Motors Corporation. This equipment will cost an estimated $4,500,000.

The Detroit, Toledo & Ironton has ordered 7 1,000-hp. Diesel-electric switching locomotives from the Electro-Motive Division of the General Motors Corporation for delivery in September, 1948.

The Indian State Railways have ordered 33 freight locomotives of the 2-8-2 type from the Baldwin Locomotive Works.

The New York Central has ordered 7 1,500-hp. Diesel-electric road-switching locomotives from the American Locomotive Company.

The Peoria & Pekin Union has ordered 2 1,000-hp. Diesel-electric switching locomotives from the Electro-Motive Division of the General Motors Corporation.

FREIGHT CARS

November Freight Car Output Totaled 8,938

Freight cars produced during November for domestic use amounted to 8,938, including 2,049 built in railroad company shops, compared with the October total of 8,364, which included 2,122 constructed in railroad company shops, the American Railway Car Institute has announced. Freight cars ordered in November for domestic use totaled 8,169, including 1,200 ordered from railroad company shops, compared with October orders for 14,537, including 7,500 ordered from railroad company shops. The backlog of cars on order and undelivered on December 1 was 125,395, including 31,326 on order from railroad company shops.

The Chicago, Burlington & Quincy has ordered 1,100 50-ton box cars, 500 70-ton hopper cars, 250 70-ton ballast cars, 500 40-ton stock cars, 300 50-ton flat cars 200 70-ton tank cars from its own shops.

The Detroit, Toledo & Ironton has ordered 10 50-ton ballast cars from the Magor Car Corporation, 100 50-ton box and 100 70-ton covered hopper cars from the American Car & Foundry Co. and 50 70-ton hopper cars from the Greenville Steel Car Company.

The Denver & Rio Grande Western has ordered 500 50-ton and 50 70-ton gondola cars from the Pressed Steel Car Company and 100 40-ton stock cars from its own Burnham, Colo., shops.

The Missouri-Illinois has ordered 100 70-ton hopper cars from the shops of the Missouri Pacific.

The Missouri Pacific has ordered 1,000 50-ton gondola cars from its own shops.

The New York, Chicago & St. Louis has ordered 400 50-ton box cars from the Pullman-Standard Car Manufacturing Company, thus bringing to 1,000 the number of such cars ordered by this company from the same builder this year.

The Pacific Fruit Express Company is inquiring for 3,000 40-ton refrigerator cars.

The Reading is inquiring for 500 70-ton or 1,000 50-ton twin hopper cars.

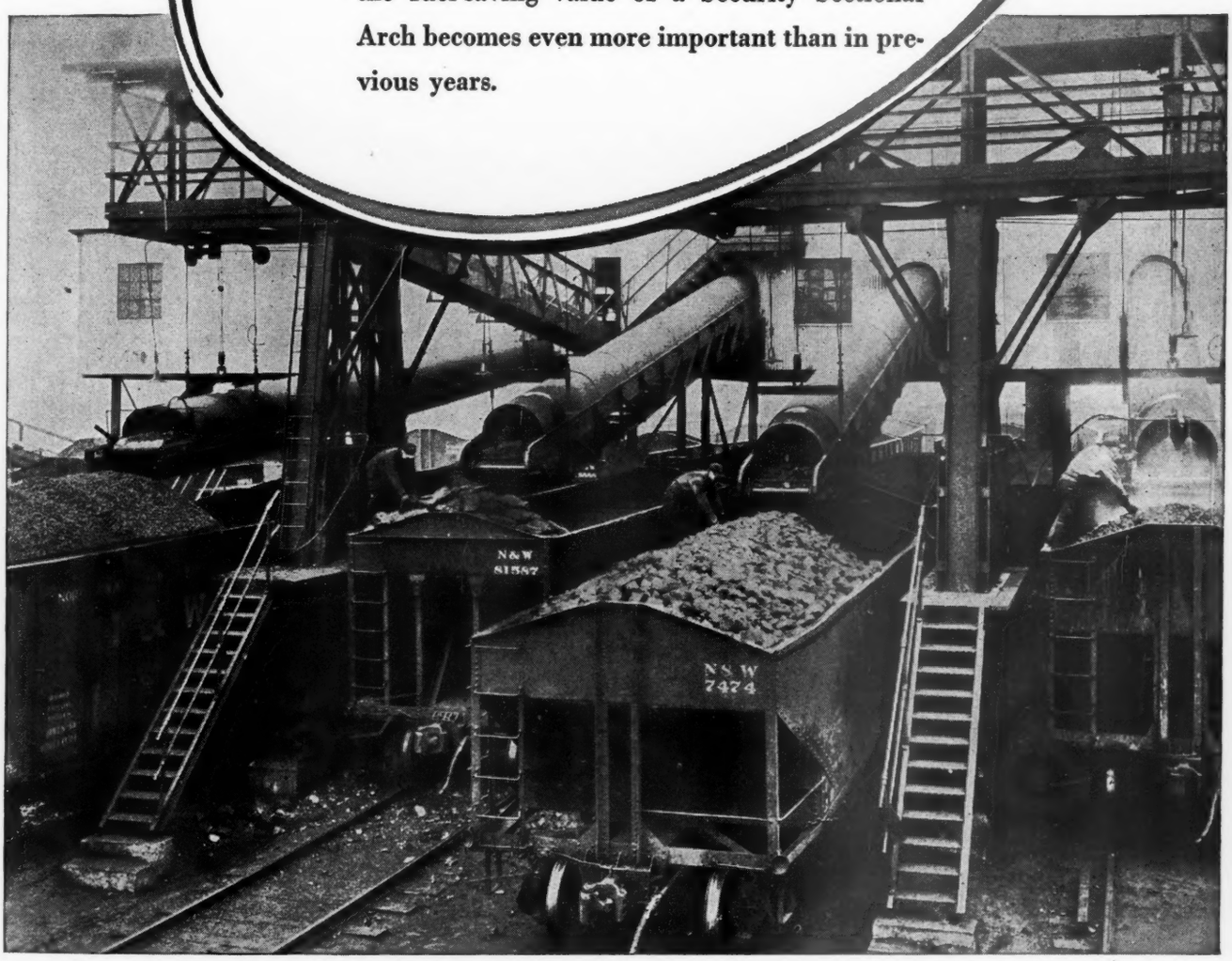
News Department continued on next left-hand page.

LOCOMOTIVES THAT "EAT" TOO MUCH!

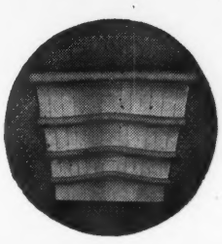
A locomotive may have an abnormal appetite for fuel because it is not getting maximum power from the coal it burns.

One measure for assuring fuel efficiency is to make certain that a complete brick arch in the firebox is maintained at all times.

And with the steadily increasing cost of coal, the fuel-saving value of a Security Sectional Arch becomes even more important than in previous years.



HARBISON-WALKER REFRACTORIES CO.
Refractories Specialists



AMERICAN ARCH CO. INC.
60 East 42nd Street, New York 17, N. Y.
Locomotive Combustion Specialists

SIGNALING

The DENVER & RIO GRANDE WESTERN has ordered materials from the General Railway Signal Company for the installation of additional centralized traffic control between Salt Lake City, Utah, and Provo. Thirteen track indication lights and 12 levers will be added to the Salt Lake City machine to control six switch machines and 24 signals on approximately 13 mi. of single track between Riverton, Utah, and Lehi. In addition, the machine at Lehi will be consolidated with the Salt Lake City machine. Type K relays and 6-ft. by 8-ft. steel bungalows with telephone compartments will be used in this installation.

The NEW YORK, CHICAGO & ST. LOUIS is installing at Lima, Ohio, a centralized traffic control machine with facilities to control the territory between Arcadia, Ohio, and Frankfort, Ind., 186 mi. The railroad's forces are presently actively engaged in wayside installation between Arcadia and St. Marys, Ohio. Material orders have been placed with the Union Switch & Signal Co. for the necessary electric switch machines, signals, relays and carrier equipment for the wayside installation between Liberty, Ind., and Frankfort, 63 mi.

IRON AND STEEL

The ALASKA is inquiring for 36,000 net tons of 100-lb. A.R.E.A. section rail with which to relay 200 mi. of track during the next two working seasons.

Overseas

ARGENTINA.—The Ferrocarril Provincial de Buenos Aires has requested bids by January 14 for the construction of 200 all-metal box cars and 150 double platform cage cars, the latter to have a removable upper platform for the transportation of livestock on the hoof. Bids are to be submitted through a local authorized agent or representative and should be addressed to the company's Administracion General, Calle 56 y 135, La Plata, Argentina, from which address a complete set of blueprints giving conditions and specifications is obtainable upon payment of 75 Argentine paper pesos.

Organizations

Walter J. Johnson, city passenger agent of the Chicago, Rock Island & Pacific, at Chicago, was elected president of the **Chicago Passenger Club** at its annual meeting held on December 6.

The **Pacific Railway Club** will hold its annual associate members' holiday entertainment on December 18, in the concert room of the Palace hotel in San Francisco, Cal.

The **New York Chapter of the Railroad-Enthusiasts, Inc.**, will be addressed by V. A. Hewitt, secretary-treasurer of the Monon, at its meeting on December 16, at 7:45 p.m., at Grand Central Terminal, New York, room 5646. Mr. Hewitt's subject will be "What's New on the Monon." The motion picture entitled "Whistle in the Night" will also be shown.

The executive committee of the **Allegheny Regional Advisory Board** will meet with the Railroad Contact Committee on December 18 at the Roosevelt Hotel, Pittsburgh, Pa. C. W. Gottschalk, general traffic manager, Jones & Laughlin Steel Corp., will preside at the meeting. W. E. Callahan, manager, open top section, Car Service Division, Association of American Railroads, will address the group on the national transportation situation. Also scheduled for discussion are important matters dealing with car supply, and loss and damage prevention.

Construction

ALASKA.—This road has begun a five-year rehabilitation program—to cost approximately $40,000,000—involving the reconstruction of much of its line between Whittier and Fairbanks, extensive grade revisions, line changes, ballasting, relaying of rail and the replacing of timber trestles and bridges with those of steel and concrete. The road intends to provide, among other things, modern coal facilities, machine shops, round houses and larger facilities for handling freight and passengers. Large amounts of surplus war materials have been secured by the Alaska for use in its operations and for improvements.

The government-owned road, in pursuing its building program, has awarded the following contracts for improvements at Anchorage, the costs of which are shown in parenthesis: To the J. B. Warrack Company of Seattle, Wash., for additions and alterations to freight house ($269,500), and for similar work on the general office building ($235,650); and to Stock & Grove, Inc. of Anchorage, for grading and drainage work in connection with proposed changes in the Anchorage yard ($189,795). A contract for $138,080 has been awarded to the Shaw-Edwards-Goodman Company of Anchorage for the dismantling and transportation from Seward of five army barracks and for their re-erection at various points along the line for use as emergency housing.

BALTIMORE & OHIO. — This road has awarded a contract to the Sutton Company, Radford, Va., for making changes in the 12th street flood wall in Low yard, Parkersburg, W. Va. The estimated cost of the project is $50,000.

GRAND TRUNK WESTERN.—This road has awarded a construction contract to the Walbridge, Aldinger Company of Detroit, Mich., for the erection, at East Yard in Detroit, of a masonry-block car repair shop and a steel-frame lumber shed, at an approximate cost of $65,000. The repair shop will be 230 ft. by 26 ft. and the shed —to be constructed with a corrugated asbestos transite roof and side walls— will measure 100 ft. by 20 ft. An additional $25,000 will be spent for machinery and tools. These facilities will replace those destroyed by fire in December, 1946.

A 31-ft. by 80-ft. wood frame extension to the existing freight house at Muskegon, Mich., will be built by the David L. Green Construction Company of that city, at a cost of $20,000. The Roberts & Schafer Co. recently completed, at the Muskegon engine terminal, the erection of a small steel coal dock consisting of a concrete hopper under the track from which a skip hoist elevates the coal to a 50-ton capacity storage bin. The coaling facility cost approximately $20,000 and track changes made by the railroad amounted to $5,000.

NEVADA NORTHERN.—In 1948 company forces of this road will relay 21.5 mi. of rail between Cannon, Nev., and Copper Flat, at an estimated cost of $30,000. The railroad plans to replace the present 90-lb. rail with new 90-lb. rail on tangent track and light curves and with 115-lb. rail on the sharper curves.

NEW YORK, NEW HAVEN & HARTFORD.—This road has authorized a project involving the installation of motor generator sets for charging storage batteries for operating baggage and mail trucks at South Station, Boston, Mass. The probable cost is $29,000.

NEW YORK CENTRAL.—Division 4 of the Interstate Commerce Commission has authorized this road to operate a 2.5-mile branch line which the same report authorizes the Cleveland, Cincinnati, Chicago & St. Louis, N.Y.C. lessee, to construct from Pana, Ill., to a connection with an Illinois Central line that reaches a new coal-mining development. The I.C. will also construct certain new tracks in the area, but that road advised the commission that it did not require authorization for the construction of such facilities, which will be switching, spur or industrial tracks. While it made no determination as to the status of the I.C. tracks, the division said the record before it afforded no basis for "disturbing" the I.C. conclusion as to their exemption.

NEW ORLEANS RAILROADS.—The Interstate Commerce Commission has set January 15, 1948, as the hearing date on the application wherein railroads serving New Orleans, La., have joined with that city in asking commission approval of the acquisitions, abandonments and financing that will be involved in carrying out the agreement recently entered for construction of a union passenger terminal there. The hearing will be held in the Jung Hotel, New Orleans, before Examiner Lyle.

SOUTHEASTERN.—The Interstate Commerce Commission has set January 6, 1948, as the hearing date on this company's application to construct a new line between Savannah, Ga., and Atlanta, approximately 229 miles. The hearing will be held at the Atlanta-Biltmore Hotel, Atlanta, before Examiner Lyle. Details of the proposed line were outlined in *Railway Age* of September 13, page 94, and previous issues.

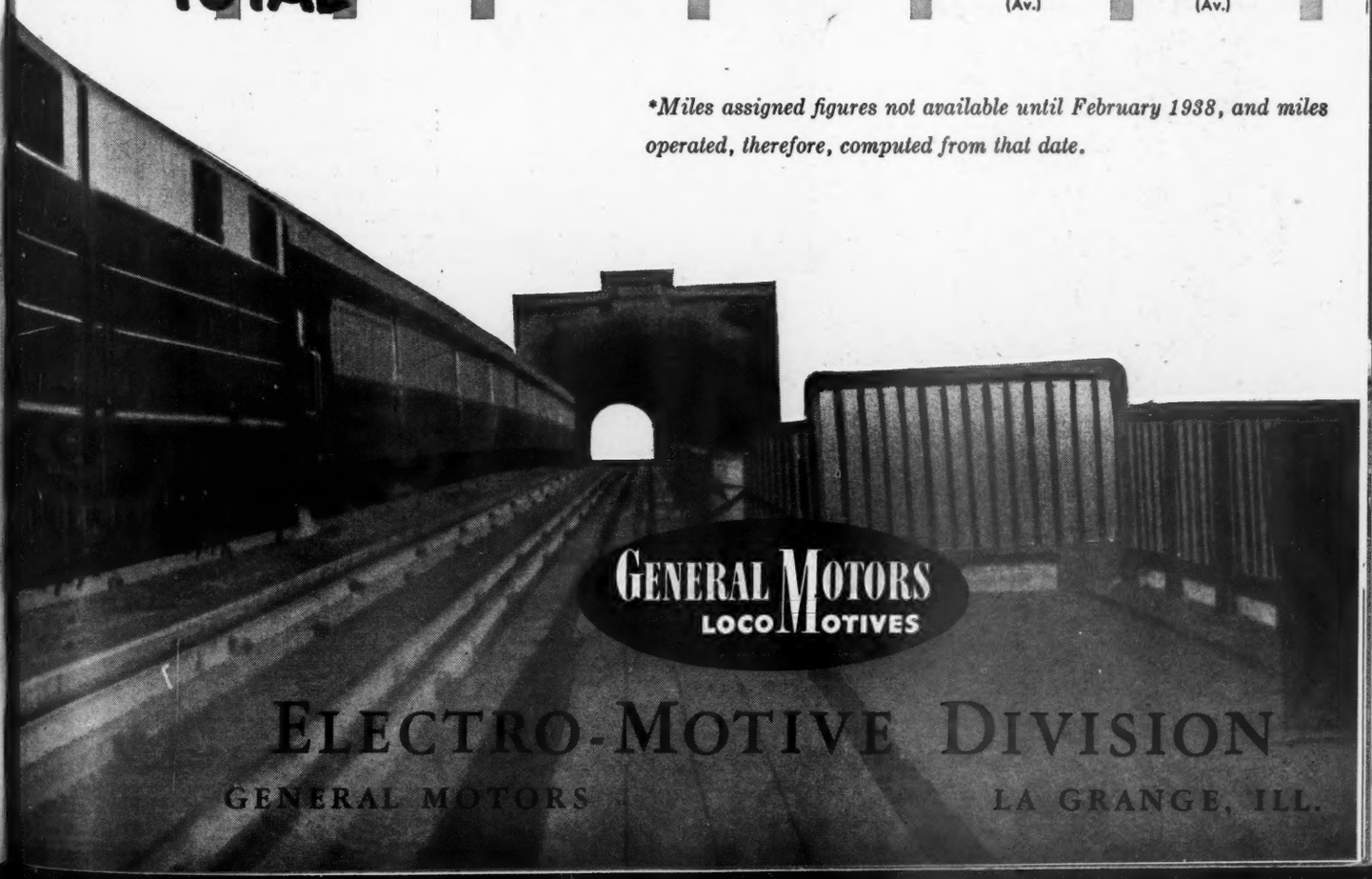
News Department continued on the second left-hand page.

THE RUNNING

10-YEAR RECORD OF GENERAL MOTORS PASSENGER LOCOMOTIVES ON THE B&O

Loco. No.	Month Delivered	Miles Operated	Miles Assigned	Av. Miles Operated Per Month	Per Cent Availability
*51	5-37	2,030,693	2,144,460	17,814	94.7
*52	6-37	2,039,355	2,138,568	17,889	95.4
53	1-38	2,148,726	2,246,530	18,685	95.6
54	1-38	2,095,200	2,181,233	18,379	96.1
55	6-38	2,147,796	2,243,592	19,525	95.7
56	6-38	2,067,545	2,232,282	18,968	92.6
57	9-40	1,596,602	1,702,375	19,471	93.8
58	9-40	1,640,981	1,709,737	20,012	96.0
59	9-40	1,693,280	1,743,068	20,650	97.1
60	6-41	1,314,895	1,336,860	18,012	98.4
61	7-41	1,406,657	1,416,290	19,269	99.3
62	7-41	1,512,125	1,542,651	21,002	98.0
63	7-41	1,511,052	1,548,710	20,987	97.6
64	2-45	565,306	592,378	19,493	95.4
66	2-45	576,449	583,993	19,878	98.7
68	9-45	400,976	413,068	18,226	97.1
70	9-45	398,349	402,377	18,106	99.0
72	10-45	408,822	410,614	18,583	99.6
74	10-45	399,998	408,958	19,048	97.8
76	10-45	403,139	413,443	19,197	97.5
78	10-45	479,444	481,236	22,831	99.6
80	10-45	495,831	497,623	23,611	99.6
TOTAL		27,333,221	28,390,046	19,249 (Av.)	96.3 (Av.)

Miles assigned figures not available until February 1938, and miles operated, therefore, computed from that date.



Supply Trade

Lawrence Wilcox, representative of the Westinghouse Air Brake Company at Chicago, retired on December 1. On that date he became secretary and treasurer of the **Air Brake Association.**

Charles W. T. Stuart, formerly vice-president in charge of sales of the **Safety Car Heating & Lighting Co.,** has been elected executive vice-president. Mr. Stuart began his business career with the Baldwin Locomotive Works in 1908. From 1909 to 1924 he worked in the motive power department of the Pennsylvania and,

Charles W. T. Stuart

in the latter year, he joined Safety Car Heating & Lighting as a sales representative. He was appointed Southeastern district manager in 1933 and also Philadelphia, Pa., manager of the Vapor Car Heating Company. Mr. Stuart was appointed assistant to the president of Safety Car Heating & Lighting in 1943, which position he

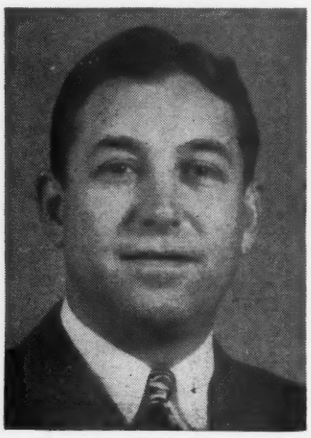
E. K. Goldschmidt

held until 1946 when he was elected vice-president in charge of sales.

The appointment of **E. K. Goldschmidt,** formerly assistant manager of the Chicago district office, as manager, to succeed **C. A. Pinyerd,** retired, also has been announced.

In order that he may have more time to devote to accounts in his territory, **R. E. Thayer,** vice-president of the **Simmons-Boardman Publishing Corporation,** has relinquished the duties of business manager of Railway Mechanical Engineer, in which post he has been succeeded by **C. W. Merriken, Jr.**

George M. Anger has been appointed western states representative for the Scintilla Magneto division of the **Bendix Aviation Corporation,** Sidney, N. Y. Plans are being made to establish an office in San Francisco, Calif., where Mr. Anger will maintain his headquarters.



George M. Anger

W. J. Acker has been appointed eastern sales manager of the **Rail Joint Company,** with headquarters as before at 50 Church street, New York. Mr. Acker joined Rail

W. J. Acker

Joint as a draftsman in 1923 and was appointed assistant to the manager of the insulated joint department in 1930. He was assigned to the sales department as a representative in 1944 and served in that capacity until his recent promotion.

Samuel MacClurkan, vice-president of the **American Arch Company** will henceforth make his headquarters at 332 South Michigan avenue, Chicago. His duties remain the same.

Donald S. Barrows, vice-president of the **Symington-Gould Corporation** and its predecessors, has retired because of ill health. Mr. Barrows was appointed chief engineer of the original Symington Company in June, 1915, and has been vice-president of Symington-Gould since October, 1920.

N, George Belury, formerly sales manager of the **American Brake Shoe Company,** has been appointed vice-president of the company's engineered castings division and **Harry C. Platt,** formerly division metallurgist, has been appointed works manager. Both men will continue to maintain headquarters in Rochester, N. Y.

John I. Snyder, Jr., a director of the **Pressed Steel Car Company** since January, 1947, has been elected chairman of the board of directors, with headquarters in Pittsburgh, Pa. Mr. Snyder began his

John I. Snyder, Jr.

business career with Kuhn, Loeb & Co. in 1936 and has resigned as manager of the buying department of that company to accept the chairmanship of Pressed Steel. It also has been announced that the office of the president of the company has been moved to Chicago where the domestic appliance division is located.

The **Wheel Truing Brake Shoe Company** of Detroit, Mich., has announced the appointment of the **St. Louis Railway Supply Company,** St. Louis, Mo., (whose formation was announced in the *Railway Age* of November 1, page 759) as agents for their abrasive brake shoes.

John L. Beard has been promoted to manager of the small parts division of the **American Hoist & Derrick Co.,** at Minneapolis, Minn.

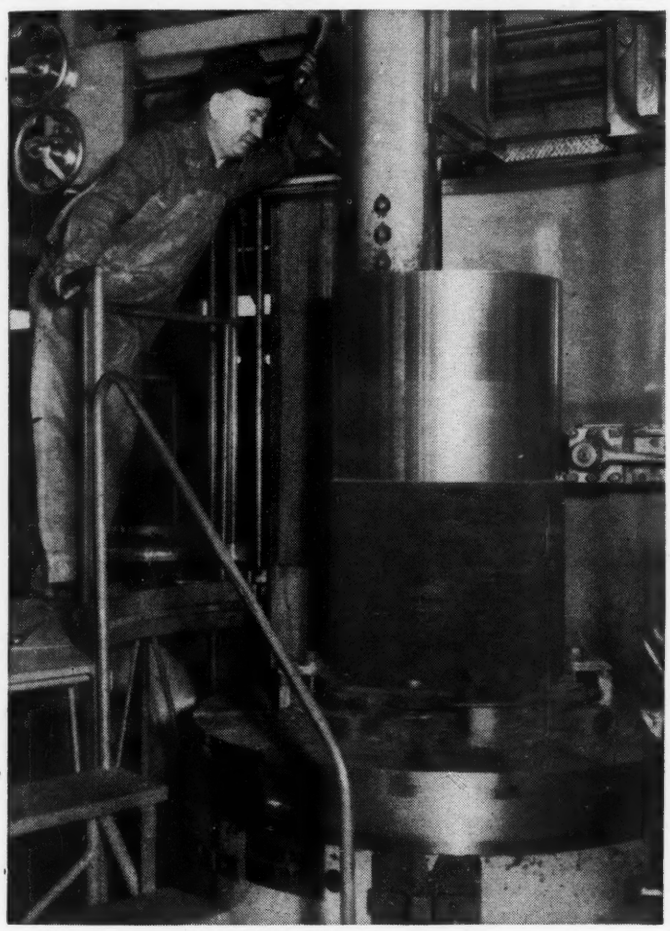
OBITUARY

Joseph Turner Ryerson, former president and treasurer of Joseph T. Ryerson & Son, Inc., at Chicago, and a director of this firm, the Inland Steel Company and the Belden Manufacturing Company, died on December 7 at St. Luke's hospital in Chicago, following a brief illness. He was 67 years old.

Harold G. Warr, vice-president of the **P. & M. Co.,** with headquarters at Chicago, died in that city on December 10, while en route to a hospital following a heart attack. He was 64 years old.

News Department continued on next left-hand page

HSGI



Hunt-Spiller are exclusive railroad sales representatives for Double Seal Piston Rings made for Diesel and other services. Double Seal rings are cast from Hunt-Spiller *Air Furnace* Gun Iron.

Reduce

CYLINDER BUSHING COSTS IN THE SHOP

***NOT* in the castings!**

WHEN they discuss Hunt-Spiller Gun Iron, one of the things which shop men agree upon is this: it machines easier and faster. In fact, many will tell you that shop time is cut as much as fifty per cent with HSGI castings. This is because the superior "texture" of the iron permits higher cutting speeds.

Here, for instance, is a view showing a 3/8 in. rough cut, inside and outside, being made on a 23½ in. inside diameter bushing. Total time for both rough and finish cuts, six hours.

So when you buy castings think of the shop cost; that is usually more important than the price-per-pound of the metal. Figuring this way, most prominent American railroads have standardized on HSGI for a generation or more.

HUNT SPILLER GUN IRON HSGI *AIR FURNACE PROCESS*

HUNT-SPILLER MFG. CORPORATION

N. C. RAYMOND, *President* — E. J. FULLER, *Vice-Pres. & Gen. Mgr.*

383 Dorchester Ave. ★ South Boston 27, Mass.

Canadian Representatives: Joseph Robb & Co., Ltd., 4050 Namur St., Montreal 16, P. Q.

Export Agents:
International Rwy. Supply Co., 30 Church Street, New York 7. N. Y.

Cylinder Bushings	Crosshead Shoes	Dunbar Sectional Type Packing
Cylinder Packing Rings	Hub Liners	Duplex Sectional Type Packing for Cylinders and Valves
Pistons or Piston Bull Rings	Shoes and Wedges	(Duplex Springs for Above Sectional Packing)
Valve Bushings	Floating Rod Bushings	Cylinder Snap Rings
Valve Packing Rings	Light Weight Valves	Valve Rings, All Shapes
Valve Bull Rings	Cylinder Liners and Pistons for Diesel Service	

Financial

CHESAPEAKE & OHIO.—*Equipment Trust Certificates.*—Division 4 of the Interstate Commerce Commission has authorized this road to issue $4,400,000 of equipment trust certificates to finance in part the acquisition of 1,300 hopper cars at an estimated cost of $5,540,000 (see *Railway Age* of November 15, page 250). The division approved a selling price of 99.5192 with a 2 per cent interest rate, the bid of Halsey Stuart & Co. and associates, which had been accepted subject to commission approval, and which will make the average annual cost about 2.09 per cent. The certificates will be dated December 1 and will mature in 10 annual installments of $440,000 each, beginning December 1, 1948.

CHICAGO, ROCK ISLAND & PACIFIC.—*Reorganization.*—This road's reorganization managers have asked the Interstate Commerce Commission for authority to consummate the approved plan for its reorganization, as confirmed December 4 by the federal court. In addition to seeking authority to transfer and acquire the debtor's property and certain subsidiary properties, the applicants also seek permission to issue and assume obligation for securities and scrip certificates, as contemplated by the plan. Securities to be issued include (1) $30,917,000 principal amount of first mortgage 4 per cent Series A bonds, to be dated January 1, 1948, and mature January 1, 1994; (2) $80,000,000 principal amount of general mortgage 4½ per cent Series A convertible income bonds, to be dated January 1, 1948, and due January 1, 2019; (3) 750,000 shares of Series A preferred stock; (4) 800,000 shares of Series B preferred stock; and (5) 3,070,789 shares of common stock without par value. Authority also is sought to extend to January 1, 1967, the maturity date of $704,000 principal amount of first mortgage 4 per cent 30-year gold bonds, due January 1, 1937.

JACKSONVILLE TERMINAL.—*New Bonds.*—The average annual cost to this company of the recently-sold $4,000,000 of series A first mortgage 3⅜ per cent bonds will be approximately 3.36 per cent, not 4.71 per cent as reported in the *Railway Age* of November 29.

SEABOARD AIR LINE.—*Equipment Trust Certificates.*—This company has sold $7,500,000 of series C equipment trust certificates to Halsey, Stuart & Co. and associates on a bid of 99.262 for 2⅝ per cent obligations. The certificates were reoffered to the public at prices yielding from 1.40 per cent to 2.95 per cent, according to maturity. (See *Railway Age* of November 29, page 64.)

SOUTHERN PACIFIC.—*Equipment Trust Certificates.*—Division 4 of the Interstate Commerce Commission has authorized this road to issue $14,500,000 of equipment trust certificates, series W, to finance in part the acquisition of 15 Diesel-electric locomotives and 3,000 freight cars at an estimated total cost of $21,785,790 (see *Railway Age* of November 15, page 250). The division approved a selling price of 99.42 with a 2¼ per cent interest rate, the bid of Salomon Bros. & Hutzler, which had been accepted subject to commission approval, and which will make the average annual cost about 2.37 per cent. The certificates, dated December 1, will mature in 10 annual installments of $1,450,000 each, beginning December 1, 1948.

Average Prices Stocks and Bonds

	Dec. 9	Last week	Last year
Average price of 20 representative railway stocks..	45.86	46.63	52.61
Average price of 20 representative railway bonds..	84.29	84.88	91.59

Dividends Declared

Alleghany & Western.—guaranteed, $3.00, semi-annually, payable January 2 to holders of record December 20.

Bangor & Aroostook. — 5% preferred, $1.25, quarterly, payable January 2 to holders of record December 13.

Chicago & North Western.—common (year-end), 50¢; 5% preferred series A, $2.50, both payable December 31 to holders of record December 12.

Dayton & Michigan. — 8% preferred, $1.00, quarterly, payable January 3 to holders of record December 15.

East Mahanoy. — $1.25, semi-annually, payable December 15 to holders of record December 5.

Little Schuylkill Navigation.—75¢, semi-annually, payable January 15 to holders of record December 12.

Pittsburgh, Fort Wayne & Chicago.—common, $1.75, quarterly, payable January 2 to holders of record December 10; 7% preferred, $1.75, quarterly, payable January 6 to holders of record December 10.

Tennessee, Alabama & Georgia. — (year-end), 10¢, payable December 15 to holders of record December 1.

United New Jersey & Canal.—$2.50, quarterly, payable January 10 to holders of record December 20.

Railway Officers

EXECUTIVE

J. D. Walker, whose promotion to assistant vice-president and general manager of the Colorado & Southern, at Denver, Colo., was reported in *Railway Age* of November 8, was born on January 26, 1885, at Leadville, Colo., and began his railroad career in 1902 as an office boy with the C. & S. in Denver. He subsequently held positions as clerk to the car accountant, chief clerk to car accountant, traveling car agent and chief clerk to superintendent of transportation. In 1917, he was appointed acting superintendent of transportation, and two years later became superintendent of transportation. He was appointed division superintendent at Trinidad, Colo., in 1925, and assistant general manager at Denver in 1930. Prior to his recent promotion, Mr. Walker had served as general manager of the C. & S. since June, 1939.

J. W. Keller, chief of tariff bureau of the Minneapolis & St. Louis, has been promoted to assistant to vice-president—traffic, with headquarters as before at Minneapolis, Minn.

Samuel C. Pace, formerly regional director of public relations of American Airlines, at Dallas, Tex., has been appointed assistant to president, in charge of public relations, of the St. Louis-San Francisco, with headquarters at St. Louis, Mo. Mr. Pace succeeds **Seth H. Moseley, II,** who has resigned to join the American Transit Association at New York.

J. G. Morrison, general freight traffic manager of the Northern Pacific, who has been on leave from the railroad to engage in traffic association work, has returned to the N. P. as assistant vice-president—traffic, with headquarters at St. Paul, Minn.

Walter Reese, vice-president and general manager of the Mississippi Valley department of the Railway Express Agency at St. Louis, Mo., has been appointed vice-president in charge of the Western departments at San Francisco, Cal., succeeding **Albert W. Hayes,** who will retire on January 1, after 47 years of continuous service. **W. M. Smith,** general manager of the Texas department, will succeed Mr. Reese as vice-president and general manager at St. Louis. Mr. Hayes was born at Hardensburg, Ky., and entered the express business in 1900 as a driver at Monett, Mo. He was advanced to cashier at Memphis, Tenn., the following year and later held various positions in many western states. Mr. Hayes went to San Francisco as vice-president in 1940.

William J. Egan has been elected president of the Hudson & Manhattan, effective January 1, succeeding **William T. Rossell,** resigned.

FINANCIAL & LEGAL ACCOUNTING

Arthur M. Waldron, whose appointment as treasurer of the New York, Chicago & St. Louis at Cleveland, Ohio, was reported in *Railway Age* of November 29, was born at Plainfield, N. J., on February 10, 1884. He entered railroad service in June, 1901, as clerk with the Union Pacific at New York. In September, 1904, Mr. Waldron was appointed to a similar position with the Southern Pacific at New York, then going with the Chicago & North

Arthur M. Waldron

Western in April, 1906, also as clerk at New York. In June, 1907, he was appointed assistant cashier, Southern Pacific at New York, becoming cashier of the Chesapeake & Ohio at New York in July, 1910. He was transferred in the same capacity to Cleveland, Ohio, in June, 1923,

News Department is continued on the next left-hand page.

RAILROADING TESTS A METAL'S SOU

Announcing RACOR'S *improved* model 4000 RAIL LUBRICATOR

. . . that minimizes destructive friction and abrasion and abusive track stresses

Positive feed of lubricant developed by each passing wheel assures ample and extensive distribution by wheel flanges. Rail life is materially extended — track maintenance substantially reduced. Safer, higher speeds and increased tonnage ratings result when RACOR'S IMPROVED RAIL LUBRICATORS are installed.

Write for circular containing complete description and illustrations of improvements on RACOR'S RAIL LUBRICATOR.

RACOR TRADE MARK REGISTERED

AMERICAN Brake Shoe COMPANY

Pioneers in the development and manufacture of

DEPTH HARDENED CROSSINGS — SAMSON SWITCH POINTS — MANGANESE STEEL GUARD RAILS
AUTOMATIC SWITCH STANDS — VERTICAL SWITCH RODS — REVERSIBLE MANGANESE STEEL CROSSINGS

World's most complete line of Track Specialties

"Use RACOR Special Trackwork where stress and wear are greatest."

RAMAPO AJAX DIVISION

332 So. Michigan Ave., Chicago 4, Illinois

ONLY RAMAPO HAS PLANTS FROM COAST TO COAST TO EXPEDITE AMERICA'S RAILROAD NEEDS

NEW YORK, N. Y. • HILLBURN, N. Y. • NIAGARA FALLS, N. Y. • WASHINGTON, D. C. • ST. LOUIS, MO. • EAST ST. LOUIS, ILL.
SUPERIOR, WIS. • DENVER, COLO. • PUEBLO, COLO. • LOS ANGELES, CALIF. • HOUSTON, TEXAS • SEATTLE, WASHINGTON
CANADIAN RAMAPO IRON WORKS, LTD., NIAGARA FALLS, ONT.

becoming also cashier of the Pere Marquette in July, 1929. Mr. Waldron was appointed assistant treasurer of the C. & O. and the P. M. in May, 1933, becoming also assistant treasurer of the New York, Chicago & St. Louis in December, 1944.

Kimon F. Vasiliou has been appointed container and loading engineer in the freight claim prevention department of the New York, New Haven & Hartford at Boston, Mass.

C. L. Spittler has been appointed general accountant of the Chesapeake & Ohio with headquarters at Cleveland, Ohio, succeeding **A. L. Engwall,** who has been appointed assistant auditor of disbursements at Richmond, Va.

PURCHASES AND STORES

Harold W. Brewer, whose appointment as purchasing agent of the Chesapeake & Ohio at Cleveland, Ohio, was reported in *Railway Age* of November 29, was born in 1901 at Detroit, Mich. Entering railroad service in 1916 with the Pere Marquette, Mr. Brewer went with the Michigan Central the next year. He returned to the Pere Marquette in 1919 and served in

Harold W. Brewer

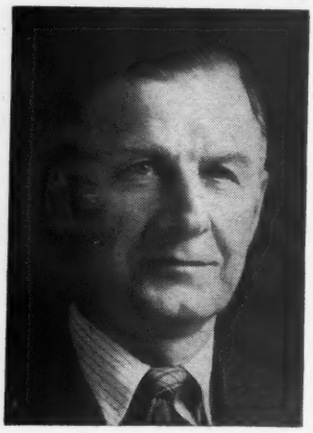
various purchasing department positions. When the Chesapeake & Ohio, the New York, Chicago & St. Louis and the Pere Marquette combined their purchasing departments in 1930 Mr. Brewer went to Cleveland, Ohio, becoming assistant purchasing agent there in 1941, which position he held until his recent appointment as purchasing agent.

TRAFFIC

J. A. Connelly, traveling rate representative of the Mineapolis & St. Louis, has been promoted to assistant general freight agent—rates and divisions, with headquarters as before at Chicago. Mr. Connelly's former position has been abolished.

G. L. Cobb, general agent, passenger department of the Chicago, Milwaukee, St. Paul & Pacific, with headquarters at New York, will retire on December 31, after 54 years of railroad service, 47 of which have been with the Milwaukee.

S. W. Firlotte, general transportation inspector of the Canadian National at Montreal, Que., has been appointed superintendent of export traffic, with the same headquarters. Born at Jacquet River, N. B.,



S. W. Firlotte

Mr. Firlotte joined the Canadian National as an operator at Campbellton, N. B., in 1915. He served with the Royal Canadian Engineers during World War I, and returned to Campbellton as operator and agent in 1919. In 1927 he was appointed traveling car service agent. Mr. Firlotte became traffic supervisor at Montreal in 1933 and was promoted to general transportation inspector there in 1946.

P. C. Alford has been appointed assistant general freight agent of the Clinchfield, with headquarters at Erwin, Tenn.

Henry L. Albert, general freight agent of the Lehigh & New England,, with headquarters at Bethlehem, Pa., will become general traffic manager there on January 1, to succeed **C. Fred Keller,** who will retire at his own request after nearly 40 years of railroad service, approximately 17 years of which have been with the Lehigh & New England.

M. M. Wolverton, assistant general agent of the Chicago, Milwaukee & St. Paul & Pacific, with headquarters at Milwaukee, Wis., will become general agent at that point on January 1, succeeding **W. J. Cavenagh,** who will retire on that date after 55 years of service with the railroad. **Frank Hagendorn,** traveling freight and passenger agent at Milwaukee, will become division freight and passenger agent at Davenport, Iowa, succeeding **J. H. Judge,** who will retire on January 1, after a railroad career of 50 years.

W. S. Dawson, assistant general freight agent, and **P. R. Mott,** foreign freight agent, of the Southern Pacific, at San Francisco, Cal., have retired after railroad careers of 53 years and 42 years respectively.

Mr. Mott is succeeded by **V. L. Arenth,** assistant foreign freight agent at San Francisco.

OPERATING

G. W. Kelly, assistant manager of personnel of the Southern Pacific's Texas & Louisiana Lines, with headquarters at Houston, Tex., has been appointed acting terminal superintendent at that point. **T. P. Kelly,** assistant superintendent at Victoria, Tex., has been appointed acting assistant manager of personnel at Houston, being succeeded in his former post by **T. A. Greeson,** trainmaster on the Victoria division. **J. W. Kraemer** has been advanced from assistant trainmaster to trainmaster, with headquarters as before at Edinburg, Tex. **R. L. Taylor,** assistant trainmaster at Del Rio, Tex., has been promoted to trainmaster at New Orleans, La.

E. Sandlin has been appointed car accountant of the Central of Georgia at Savannah, Ga., succeeding **D. W. Brantley,** deceased.

W. J. Riesberry, general agent of the Canadian National at Toronto, Ont., has been appointed superintendent of the Oshawa Railway at Oshawa, Ont., succeeding **J. H. McDiarmid,** who has retired on pension after many years of service. **H. H. Holmes,** agent, C. N. R., at Hamilton, Ont., has been appointed general agent at Toronto, succeeding Mr. Riesberry.

James J. McDermott, superintendent of the Terminal division of the Railway Express Agency at New York, has retired after 47 years of continuous service.

SPECIAL

William W. Martin, superintendent of training of the Railway Express Agency, has been appointed assistant to general manager of public relations and sales at New York. **Victor Del Aquila,** assistant chief clerk to the general manager of public relations and sales, has been appointed supervisor of public relations and sales, with headquarters as before at New York.

OBITUARY

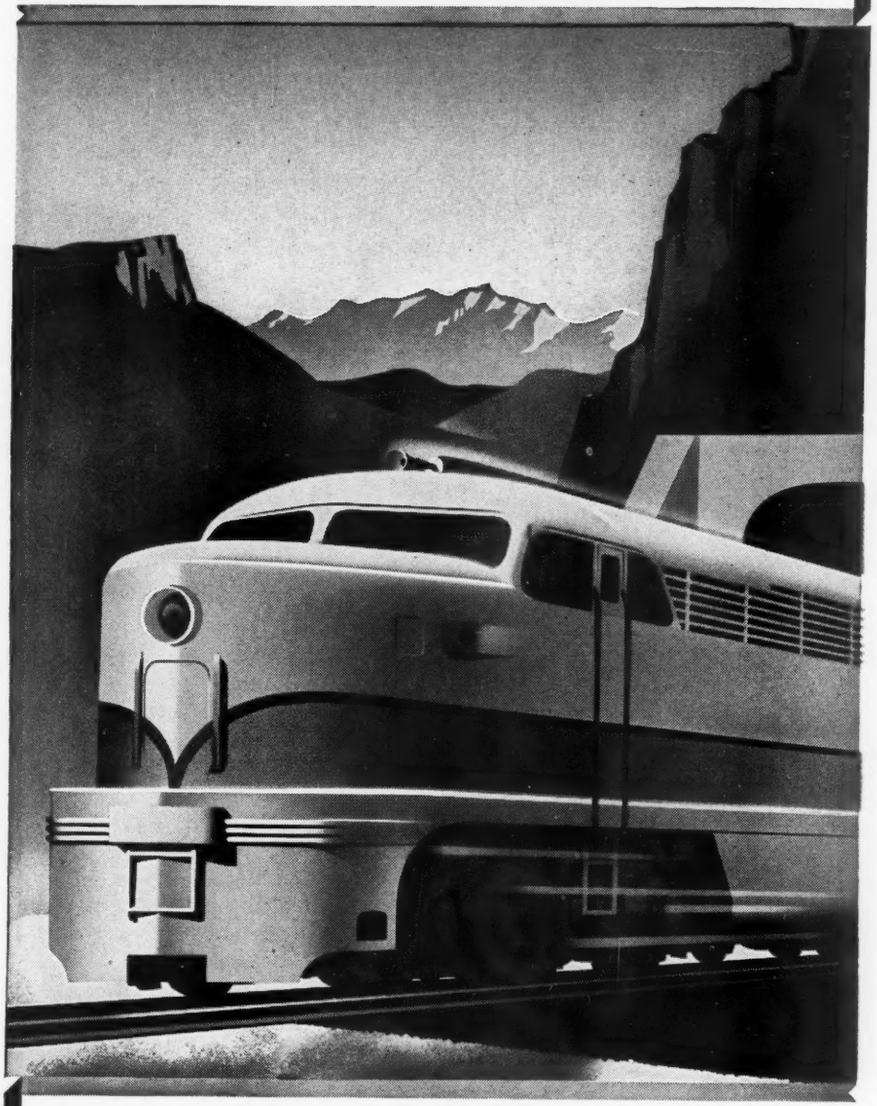
Charles F. Philbrook, tie and timber agent of the Boston & Maine, with headquarters at Boston, Mass., died on December 2 at the Winchester (Mass.) hospital after a short illness, at the age of 60.

J. R. Hitchcock, former general manager of the Atchison, Topeka & Santa Fe's Coast Lines, at Los Angeles, Cal., who retired in 1939, died on December 6 in the Santa Fe hospital at Los Angeles, after a short illness.

James Benton French, retired consulting engineer, who held patents on devices for electrically-operated car float transfer bridges now used at various New York railroad terminals, died on December 2 at his home in Jamaica, N. Y., at the age of 84. He was bridge engineer of the Chesapeake & Ohio from 1892 to 1898, of the West Virginia Short Line (now part of the Baltimore & Ohio) during 1900 and 1901, and of the Long Island from 1904 to 1908. He also designed bridges for the New York, New Haven & Hartford. Mr. French began private consulting practice in 1908 and was in charge of design and construction work for the Long Island, the Lehigh Valley, the Hudson & Manhattan and other railroad companies.

Table of Freight Operating Statistics appears on the next left-hand page.

FAIRBANKS·MORSE Diesel LOCOMOTIVES



No... cylinder heads or valves

mean less weight, less bulk, greater efficiency in Fairbanks-Morse Diesel Locomotives

Fairbanks-Morse

A name worth remembering

Two pistons in each cylinder ... driven apart by a central explosion. This is the principle of the exclusive opposed-piston diesel that powers Fairbanks-Morse Diesel Locomotives.

It eliminates cylinder heads and valves, reduces moving parts—and so makes servicing and maintenance easier, less frequent, lower in cost.

Fairbanks-Morse locomotives are powerful, efficient, economical to operate—and they're backed by 117 years of manufacturing experience. No wonder that more and more diesel locomotives bearing the name Fairbanks-Morse are riding the rails of America.

Freight Operating Statistics of Large Steam Railways—Selected

Region	Road	Year	Miles of road operated	Train-miles	Locomotive-miles: Principal and helper	Locomotive-miles: Light	Car-miles: Loaded (*thousands*)	Car-miles: Per cent loaded	Ton-miles (*thousands*): Gross excl. locos. & tenders	Ton-miles (*thousands*): Net-rev. and non-rev.	Road locos. on line: Serviceable: Unstored	Road locos. on line: Serviceable: Stored	Road locos. on line: B. O.	Road locos. on line: Per cent B. O.
New Eng. Region	Boston & Albany	1947	362	143,603	158,813	25,346	3,410	65.4	223,430	96,622	66	2	25	26.9
		1946	362	147,061	160,454	20,993	3,403	66.3	212,632	88,261	61	..	27	30.7
	Boston & Maine	1947	1,746	308,769	318,324	13,670	11,611	74.5	695,145	311,443	103	4	13	10.8
		1946	1,750	303,167	313,299	12,496	11,343	73.2	689,169	311,439	105	19	19	13.3
	N. Y., New H. & Hartf*	1947	1,820	339,582	564,045	58,271	13,039	72.6	776,745	354,836	228	5	22	14.7
		1946	1,820	359,788	494,487	41,033	14,450	73.8	831,568	371,683	196	13	56	22.8
Great Lakes Region	Delaware & Hudson	1947	794	276,687	332,839	32,360	12,241	74.1	846,234	472,748	126	32	26	14.1
		1946	846	290,452	352,001	35,624	12,453	68.9	896,907	489,803	110	64	36	17.1
	Del., Lack. & Western	1947	970	324,206	369,314	46,546	14,207	71.0	932,428	437,885	116	12	15	10.5
		1946	971	285,728	326,235	39,313	12,413	73.5	791,648	377,885	106	28	39	22.5
	Erie	1947	2,229	793,899	848,374	62,797	38,481	65.8	2,532,627	1,045,653	270	14	87	23.5
		1946	2,242	731,854	778,213	65,344	36,863	68.9	2,378,562	1,036,446	266	37	83	21.5
	Grand Trunk Western	1947	972	290,241	294,948	2,759	9,431	68.4	601,008	265,210	65	..	7	9.7
		1946	972	267,680	277,217	1,994	9,108	68.2	575,261	256,657	68	1	7	9.2
	Lehigh Valley	1947	1,239	322,227	358,466	58,336	14,144	70.1	967,293	482,353	96	11	61	36.3
		1946	1,242	290,742	324,625	50,296	13,235	73.3	881,740	452,930	117	18	34	20.1
	New York Central	1947	10,338	3,217,255	3,443,605	232,563	118,773	66.0	8,010,052	3,756,926	1,017	48	310	22.5
		1946	10,328	3,096,442	3,318,978	232,231	116,436	64.8	7,982,707	3,753,969	988	37	337	24.7
	New York, Chi. & St. L.	1947	1,656	625,728	632,057	8,558	25,187	68.6	1,612,232	707,815	147	2	16	9.7
		1946	1,656	538,569	543,396	6,685	22,165	70.6	1,406,013	649,011	139	6	31	17.6
	Pitts. & Lake Erie	1947	223	97,668	98,780	74	3,967	67.8	328,889	195,996	33	2	15	30.0
		1946	229	99,709	100,621	10	4,038	64.5	343,574	201,458	34	3	12	24.5
	Wabash	1947	2,381	647,263	662,725	15,944	23,855	73.6	1,478,906	661,314	159	10	34	16.7
		1946	2,381	627,992	647,393	15,449	22,803	73.9	1,423,588	653,486	161	10	37	17.8
Central Eastern Region	Baltimore & Ohio	1947	6,100	1,982,701	2,471,822	280,529	71,279	65.5	5,142,327	2,585,317	825	24	294	25.7
		1946	6,103	1,996,322	2,473,706	274,652	69,843	65.7	5,093,597	2,594,251	821	21	327	28.0
	Central of New Jersey*	1947	418	79,427	83,747	9,336	3,192	67.4	226,286	121,107	46	..	23	33.3
		1946	419	83,709	94,933	21,852	3,449	65.6	233,141	125,085	52	2	28	34.1
	Central of Pennsylvania	1947	213	77,291	88,668	16,997	3,054	70.0	214,325	118,937	44	3	18	27.7
		1946	230	82,854	98,879	21,048	3,091	67.7	223,661	121,866	45	1	26	36.1
	Chicago & Eastern Ill.	1947	910	173,232	173,958	3,670	5,476	71.2	357,150	176,632	58	..	15	20.5
		1946	910	185,800	187,863	3,727	5,626	71.0	377,468	191,628	56	..	22	28.2
	Elgin, Joliet & Eastern	1947	391	117,310	121,818	3,788	3,653	69.5	277,171	153,351	42	11	8	13.1
		1946	391	113,572	118,021	3,795	3,534	67.7	268,066	144,581	42	1	21	32.8
	Pennsylvania System	1947	10,031	3,873,988	4,402,973	614,715	156,945	68.8	10,905,369	5,561,582	1,906	31	271	12.3
		1946	10,033	3,919,233	4,527,050	601,210	156,737	67.8	11,000,027	5,583,979	1,869	65	280	12.6
	Reading	1947	1,356	436,703	480,390	57,609	16,522	68.8	1,233,249	686,632	216	30	34	12.1
		1946	1,361	522,163	582,528	66,642	17,516	67.1	1,329,571	739,842	251	21	51	15.8
	Western Maryland	1947	837	224,954	274,823	39,441	7,837	62.9	657,448	367,249	156	4	14	8.0
		1946	839	202,346	240,311	33,400	6,955	64.2	571,905	321,809	144	8	10	6.2
Pocahontas Region	Chesapeake & Ohio	1947	4,979	1,708,831	1,816,928	80,325	74,512	57.5	6,333,544	3,550,476	625	5	79	11.1
		1946	4,976	1,567,502	1,659,422	74,249	69,030	58.7	5,725,832	3,209,056	577	4	106	15.4
	Norfolk & Western	1947	2,108	809,479	863,873	64,949	37,330	59.1	3,254,513	1,800,508	262	30	21	6.7
		1946	2,139	747,444	797,879	54,989	34,824	59.0	3,034,403	1,673,044	265	41	17	5.3
Southern Region	Atlantic Coast Line	1947	5,556	783,569	799,390	11,846	21,390	67.4	1,397,115	647,181	337	43	50	11.6
		1946	5,554	813,153	821,354	11,752	21,205	70.4	1,352,580	636,775	377	52	23	5.1
	Central of Georgia*	1947	1,782	277,777	281,309	4,846	6,642	70.8	430,772	204,005	87	..	13	13.0
		1946	1,783	292,574	298,806	6,462	7,263	70.7	484,961	225,116	92	..	9	8.9
	Gulf, Mobile & Ohio	1947	2,846	399,085	404,352	358	17,995	73.6	1,155,947	564,651	188	14	2	1.0
		1946	2,846	456,815	522,042	3,408	15,977	72.7	1,028,172	515,404	174	21	39	16.7
	Illinois Central	1947	6,581	1,427,509	1,442,136	51,216	53,564	67.2	3,614,351	1,733,513	656	23	76	11.4
		1946	6,582	1,356,352	1,363,489	49,299	52,007	67.4	3,566,166	1,746,494	592	7	96	13.8
	Louisville & Nashville	1947	4,756	1,523,233	1,650,936	45,882	38,895	64.1	2,849,268	1,498,393	400	2	77	16.1
		1946	4,750	1,452,689	1,578,575	43,714	38,494	63.9	2,761,346	1,424,626	383	18	72	15.2
	Nash., Chatt. & St. Louis	1947	1,052	282,608	304,626	8,209	6,577	76.9	411,639	199,478	88	..	15	14.6
		1946	1,053	290,816	298,616	8,250	6,400	79.1	393,157	187,906	85	..	16	15.8
	Seaboard Air Line	1947	4,145	716,315	772,808	13,299	20,894	70.0	1,357,532	637,712	270	11	60	17.6
		1946	4,139	713,907	753,226	10,344	21,627	73.0	1,366,610	642,537	252	14	69	20.6
	Southern	1947	6,451	1,597,689	1,626,553	29,587	43,856	72.7	2,725,202	1,262,761	542	38	107	15.6
		1946	6,450	1,989,128	2,021,286	35,215	46,480	72.3	2,930,106	1,365,935	597	..	103	14.7
Northwestern Region	Chi. & North Western	1947	8,061	1,138,825	1,187,143	33,505	35,851	68.9	2,498,059	1,129,307	360	..	122	25.3
		1946	8,062	1,101,791	1,148,486	29,723	36,111	69.1	2,426,541	1,029,163	384	..	132	25.6
	Chicago Great Western	1947	1,445	268,237	271,461	13,868	9,052	69.3	594,588	267,992	67	..	14	17.3
		1946	1,445	259,225	261,160	10,851	8,060	69.2	534,114	239,375	66	..	13	16.5
	Chi., Milw., St. P. & Pac.	1947	10,677	1,599,731	1,680,564	75,173	53,467	64.7	3,701,558	1,674,348	486	13	103	17.1
		1946	10,725	1,477,813	1,576,349	65,986	50,264	65.0	3,453,725	1,600,477	481	40	85	14.0
	Chi., St. P., Minneap. & Om	1947	1,606	227,279	242,484	13,166	6,172	72.0	409,175	192,176	79	..	35	30.7
		1946	1,606	218,598	235,663	14,788	5,847	70.8	397,584	187,697	80	..	42	34.4
	Duluth, Missabe & Iron Range	1947	548	171,300	171,918	980	9,144	51.2	839,416	510,036	41	..	1	2.4
		1946	547	157,188	158,111	1,024	8,505	50.9	786,486	480,208	46	..	3	6.1
	Great Northern	1947	8,237	1,319,701	1,332,477	57,826	50,786	59.6	3,923,275	1,841,132	381	9	75	16.1
		1946	8,236	1,208,594	1,217,106	52,453	45,954	59.2	3,542,561	1,671,979	370	29	90	18.4
	Minneap., St. P. & S. St. M.	1947	4,181	520,294	534,467	11,436	15,098	62.3	1,081,405	511,088	125	..	17	12.0
		1946	4,181	522,213	535,390	9,142	14,668	59.8	1,083,151	504,711	132	..	13	9.0
	Northern Pacific	1947	6,623	976,583	1,032,425	58,059	37,722	65.2	2,628,143	1,190,548	351	15	59	13.9
		1946	6,624	976,755	1,040,553	64,703	36,104	63.6	2,644,420	1,142,672	365	6	59	13.7
Central Western Region	Atch., Top. & S. Fe (incl. G. C. & S. F. & P. & S. F.)	1947	13,107	2,911,478	3,090,999	155,164	112,068	71.0	7,191,224	2,983,784	759	77	119	12.5
		1946	13,084	2,792,978	2,953,659	159,356	104,513	71.7	6,590,174	2,719,709	757	63	145	15.0
	Chi. Burl. & Quincy	1947	8,663	1,553,107	1,606,513	62,169	58,673	62.9	4,101,679	1,832,464	429	..	65	13.2
		1946	8,671	1,391,082	1,440,832	52,347	51,579	62.5	3,624,804	1,604,082	438	34	70	12.9
	Chi. Rock I. & Pac.*	1947	7,623	1,166,619	1,195,449	11,787	38,166	68.0	2,513,330	1,152,283	279	29	93	23.2
		1946	7,620	1,159,029	1,189,327	18,322	36,182	66.1	2,416,122	1,092,254	305	25	98	22.9
	Denver & R. G. Wn.*	1947	2,467	490,929	552,214	71,256	15,759	75.5	1,022,119	482,528	178	18	46	19.0
		1946	2,491	466,816	531,383	69,821	14,073	72.2	909,252	426,795	183	6	47	19.9
	Southern Pacific Company	1947	8,127	2,252,064	2,539,868	494,853	91,344	68.5	6,030,134	2,497,119	782	15	164	17.1
		1946	8,154	2,330,886	2,637,133	458,283	90,869	69.6	5,975,627	2,518,706	799	1	206	20.5
	Union Pacific	1947	9,774	3,073,448	3,230,721	258,231	118,570	66.9	7,895,364	3,414,131	749	17	79	9.3
		1946	9,775	3,037,660	3,179,675	240,047	110,662	64.6	7,353,064	2,948,789	753	39	103	11.5
	Western Pacific	1947	1,192	275,592	317,976	34,209	12,711	79.6	770,061	363,680	88	23	22	16.5
		1946	1,192	288,553	321,523	31,239	12,370	74.2	776,486	350,915	103	11	17	13.0
Southwestern Region	International Great Northern*	1947	1,110	237,428	239,616	306	6,481	71.5	416,513	202,646	78	..	12	13.3
		1946	1,110	207,470	209,475	687	5,206	71.6	346,235	159,461	56	..	18	24.3
	Kansas City Southern	1947	885	201,359	206,112	652	9,003	66.8	611,220	288,308	50	2	7	11.9
		1946	885	208,291	245,539	4,101	8,049	67.3	546,162	257,752	63	1	8	11.1
	Mo.-Kans.-Texas Lines	1947	3,241	516,035	526,880	8,856	15,723	65.4	1,023,069	446,677	120	..	33	21.6
		1946	3,241	480,001	491,461	8,743	13,960	67.7	901,660	399,794	115	..	49	29.9
	Missouri Pacific*	1947	6,985	1,531,713	1,604,259	40,009	51,255	69.3	3,401,091	1,576,913	437	..	55	11.2
		1946	7,053	1,376,347	1,433,485	34,228	45,438	69.6	3,001,674	1,379,220	428	4	71	14.1
	Texas & Pacific	1947	1,851	493,547	493,547	16,153	16,282	63.7	1,128,086	487,449	110	4	12	9.5
		1946	1,871	346,858	346,858	7,258	11,199	66.2	740,990	309,512	103	45	5	3.3
	St. Louis-San Francisco	1947	4,615	927,406	967,670	10,905	23,605	65.5	1,619,930	721,473	290	12	31	9.3
		1946	4,615	921,750	961,609	11,028	22,160	69.3	1,467,037	674,272	308	3	30	8.8
	St. Louis Southw. Lines	1947	1,568	353,893	355,541	4,883	13,691	75.3	826,639	369,519	83	8	13	12.5
		1946	1,568	328,673	330,164	4,504	13,307	80.8	770,710	344,518	84	26	25	18.5
	Texas & New Orleans	1947	4,314	907,420	907,695	13,168	25,120	71.3	1,611,780	726,511	216	..	34	13.6
		1946	4,321	911,777	912,757	12,390	24,840	73.6	1,572,754	725,025	217	1	47	17.7

Compiled by the Bureau of Transport Economics and Statistics, Interstate Commerce Commission. Subject to revision.

Items for the Month of September 1947 Compared with September 1946

Region	Region, road, and year	Freight cars on line: Home	Foreign	Total	Per Cent B. O.	G.t.m. per train-hr. excl.locos. and tenders	G.t.m. per train-mi. excl.locos. and tenders	Net ton-mi. per train-mile	Net ton-mi. per l'd. car-mile	Net ton-mi. per car-day	Car miles per car-day	Net daily ton-mi. per road-mi.	Coal lb. per 1000 g.t.m. inc. loco.	Mi. per loco. per day
New Eng. Region	Boston & Albany 1947	217	4,902	5,119	0.4	24,273	1,569	679	28.3	622	33.6	8,897	183	74.4
	1946	290	5,537	5,827	0.5	22,117	1,456	604	25.9	525	30.6	8,127	192	76.7
	Boston & Maine 1947	1,501	11,602	13,103	2.7	34,104	2,257	1,011	26.8	838	41.9	5,946	106	101.1
	1946	1,734	11,299	13,033	2.9	34,160	2,280	1,030	27.5	797	39.6	5,932	102	82.7
	N. Y., New H. & Hartf* 1947	1,243	19,213	20,456	1.7	31,329	2,295	1,048	27.2	586	29.7	6,499	83	90.1
	1946	1,798	19,445	21,243	2.3	30,203	2,322	1,038	25.7	611	32.2	6,807	90	71.9
Great Lakes Region	Delaware & Hudson 1947	1,751	7,804	9,555	3.8	54,997	3,074	1,717	38.6	1,629	56.9	19,847	98	70.0
	1946	2,336	7,567	9,903	3.1	53,975	3,107	1,696	39.3	1,680	61.9	19,299	100	65.6
	Del., Lack. & Western 1947	4,036	13,433	17,469	4.4	42,341	2,923	1,373	30.8	836	38.2	15,048	106	107.7
	1946	4,157	14,364	18,521	3.6	40,604	2,826	1,349	30.4	716	32.0	12,972	108	79.6
	Erie 1947	5,752	27,035	32,787	3.4	53,059	3,213	1,326	27.2	1,091	61.0	15,637	93	89.3
	1946	5,876	28,898	34,774	2.6	52,552	3,276	1,427	28.1	961	49.7	15,410	92	80.1
	Grand Trunk Western 1947	3,947	9,854	13,801	7.1	39,865	2,083	919	28.1	616	32.0	9,095	87	148.6
	1946	3,963	10,245	14,208	6.3	42,609	2,161	964	28.2	604	31.5	8,802	86	133.4
	Lehigh Valley 1947	6,319	15,088	21,407	7.8	53,667	3,078	1,535	34.1	748	31.3	12,977	99	86.6
	1946	4,634	12,561	17,195	4.3	51,027	3,142	1,614	34.2	827	33.0	12,156	103	78.1
	New York Central 1947	41,826	104,506	146,332	3.3	39,361	2,524	1,184	31.6	858	41.1	12,114	106	99.3
	1946	46,362	106,566	152,928	4.0	40,193	2,615	1,230	32.2	826	39.6	12,116	103	96.7
	New York, Chi. & St. L. 1947	2,042	13,945	15,987	1.6	49,783	2,584	1,134	28.1	1,446	75.0	14,247	86	137.9
	1946	2,269	13,051	15,320	2.0	50,181	2,621	1,210	29.3	1,412	68.2	13,063	83	111.2
	Pitts. & Lake Erie 1947	3,146	9,147	12,293	7.5	51,502	3,389	2,019	49.4	518	15.5	29,297	100	73.3
	1946	2,677	10,309	12,986	3.5	51,876	3,458	2,028	49.9	549	17.1	29,324	93	71.9
	Wabash 1947	4,893	15,407	20,300	4.5	45,508	2,302	1,030	27.7	1,051	51.5	9,258	102	116.4
	1946	5,303	14,146	19,449	3.5	44,420	2,288	1,050	28.7	1,087	51.3	9,149	107	111.6
Central Eastern Region	Baltimore & Ohio 1947	38,245	51,802	90,047	4.8	32,314	2,654	1,334	36.3	976	41.1	14,127	144	82.7
	1946	36,815	52,090	88,905	4.5	31,968	2,607	1,328	37.1	964	39.5	14,169	143	81.8
	Central of New Jersey* 1947	638	9,642	10,280	3.8	37,181	2,927	1,567	37.9	380	14.9	9,658	117	72.1
	1946	1,136	10,045	11,181	4.4	35,659	2,883	1,547	36.3	382	16.1	9,951	134	70.8
	Central of Pennsylvania 1947	802	4,151	4,953	8.6	37,640	2,921	1,621	38.9	782	28.7	18,613	101	65.8
	1946	1,177	4,049	5,226	8.7	31,806	2,797	1,524	39.4	758	28.4	17,662	126	64.6
	Chicago & Eastern Ill. 1947	1,476	4,592	6,068	4.6	35,205	2,078	1,028	32.3	971	42.3	6,470	113	84.8
	1946	1,893	4,319	6,212	5.0	36,323	2,053	1,042	34.1	1,040	43.0	7,019	111	85.9
	Elgin, Joliet & Eastern 1947	5,755	8,901	14,656	2.1	18,550	2,504	1,385	42.0	343	11.8	13,073	121	102.8
	1946	7,238	9,209	16,447	2.1	19,773	2,500	1,348	40.9	297	10.7	12,326	135	91.2
	Pennsylvania System 1947	109,192	139,079	248,271	10.3	37,805	2,914	1,486	35.4	738	30.2	18,481	116	82.5
	1946	120,244	127,617	247,861	8.6	38,053	2,903	1,473	35.6	752	31.2	18,552	120	83.9
	Reading 1947	7,477	24,948	32,425	3.5	34,835	2,832	1,577	41.6	708	24.8	16,879	98	73.7
	1946	9,331	24,914	34,245	2.4	34,079	2,552	1,420	42.2	732	25.8	18,120	105	77.1
	Western Maryland 1947	2,462	5,826	8,288	.8	30,866	2,968	1,658	46.9	1,438	48.8	14,626	149	66.4
	1946	2,353	5,448	7,801	1.2	30,562	2,900	1,632	46.3	1,323	44.5	12,785	150	61.1
Pocahontas Region	Chesapeake & Ohio 1947	44,318	30,379	74,697	1.6	57,087	3,762	2,109	47.6	1,557	56.8	23,770	76	96.3
	1946	39,528	34,975	74,503	2.2	54,482	3,723	2,087	46.5	1,419	52.0	21,497	76	91.4
	Norfolk & Western 1947	27,157	8,934	36,091	2.3	65,304	4,084	2,260	48.2	1,701	59.6	28,471	88	106.5
	1946	23,178	8,144	31,322	.9	65,204	4,112	2,267	48.0	1,779	62.7	26,072	85	95.9
Southern Region	Atlantic Coast Line 1947	7,895	18,505	26,400	4.8	27,467	1,789	829	30.3	843	41.3	3,883	115	68.3
	1946	7,746	17,477	25,223	5.4	27,124	1,665	784	30.0	826	39.1	3,822	115	66.6
	Central of Georgia* 1947	1,556	5,946	7,502	5.0	28,061	1,554	736	30.7	950	43.7	3,816	139	99.3
	1946	1,318	6,419	7,737	1.2	30,684	1,662	772	31.0	972	44.3	4,209	130	109.2
	Gulf, Mobile & Ohio 1947	2,347	15,890	18,237	1.2	51,453	2,904	1,419	31.4	1,123	48.6	6,613	54	70.7
	1946	2,588	11,546	14,134	1.2	36,561	2,265	1,136	32.3	1,160	49.6	6,037	100	78.2
	Illinois Central 1947	13,568	37,222	50,790	1.7	43,319	2,601	1,247	32.4	1,140	52.4	8,780	113	80.0
	1946	13,255	34,759	48,014	1.4	44,799	2,693	1,319	33.6	1,153	50.9	8,845	104	72.5
	Louisville & Nashville 1947	23,684	16,720	40,404	4.3	28,807	1,871	984	38.5	1,244	50.4	10,502	122	122.6
	1946	23,950	15,918	39,868	4.0	29,850	1,901	981	37.0	1,190	50.3	9,997	123	119.3
	Nash., Chatt. & St. Louis 1947	1,019	5,493	6,512	7.6	27,699	1,461	708	30.3	1,038	44.5	6,321	133	104.4
	1946	907	4,854	5,761	3.2	25,782	1,354	647	29.4	1,029	44.3	5,948	134	108.4
	Seaboard Air Line 1947	5,509	15,733	21,242	1.5	33,031	1,937	909	30.5	1,006	47.1	5,128	117	85.3
	1946	5,374	16,704	22,078	1.9	33,671	1,955	919	29.7	958	44.1	5,175	113	84.3
	Southern 1947	12,101	29,105	41,206	5.1	28,865	1,727	800	28.8	1,023	48.9	6,525	124	85.1
	1946	13,806	32,657	46,463	5.0	25,599	1,494	696	29.4	961	45.2	7,059	139	102.8
Northwestern Region	Chi. & North Western 1947	18,120	41,897	60,017	3.1	32,660	2,354	1,064	31.5	619	28.6	4,670	118	92.0
	1946	20,448	39,742	60,190	3.3	33,345	2,324	986	28.5	569	28.9	4,255	121	82.9
	Chicago Great Western 1947	943	5,352	6,295	3.2	36,260	2,219	1,000	29.6	1,443	70.3	6,182	120	124.8
	1946	1,059	4,811	5,870	6.0	36,050	2,063	925	29.7	1,373	66.8	5,522	119	120.8
	Chi., Milw., St. P. & Pac. 1947	17,967	48,672	66,639	1.6	35,320	2,337	1,057	31.3	862	42.6	5,227	113	105.8
	1946	19,595	40,913	60,508	1.7	36,604	2,364	1,095	31.8	903	43.6	4,974	114	98.0
	Chi., St. P., Minneap. & Om. 1947	1,019	8,026	9,045	4.6	22,807	1,870	879	31.1	728	32.5	3,989	115	81.0
	1946	1,044	7,605	8,649	6.2	23,695	1,889	892	32.1	743	32.7	3,896	110	73.5
	Duluth, Missabe & Iron Range 1947	14,541	541	15,082	1.8	82,660	5,071	3,081	55.8	1,128	39.5	31,024	57	146.0
	1946	14,509	530	15,039	2.8	85,136	5,175	3,160	56.5	1,092	38.0	29,263	62	123.3
	Great Northern 1947	18,204	32,588	50,792	2.7	44,079	3,008	1,411	36.3	1,248	57.7	7,451	94	108.7
	1946	19,558	31,067	50,625	2.9	43,956	2,964	1,399	36.4	1,182	54.8	6,767	91	92.9
	Minneap., St. P. & S. St. M. 1947	5,534	11,440	16,974	4.5	34,466	2,109	997	33.9	1,047	49.6	4,075	88	144.3
	1946	4,844	11,695	16,539	4.8	34,624	2,102	980	34.4	1,132	55.0	4,024	90	140.9
	Northern Pacific 1947	12,979	19,647	32,626	4.1	43,846	2,711	1,228	31.6	1,171	56.9	5,992	133	93.6
	1946	15,246	21,797	37,043	3.3	42,811	2,729	1,179	31.6	1,061	52.7	5,750	126	93.0
Central Western Region	Atch., Top. & S. Fe (incl. G. C. & S. F. & P. & S. F.) 1947	32,458	38,392	70,850	5.7	48,154	2,482	1,030	26.6	1,357	71.8	7,588	97	119.6
	1946	38,726	41,123	79,849	4.7	46,630	2,369	978	26.0	1,111	59.6	6,929	103	114.2
	Chi. Burl. & Quincy 1947	13,248	29,466	42,714	2.6	44,398	2,652	1,185	31.2	1,402	71.3	7,051	99	119.8
	1946	16,675	28,287	44,962	2.7	44,013	2,619	1,159	31.1	1,177	60.6	6,166	102	96.6
	Chi. Rock I. & Pac.* 1947	8,170	26,380	34,550	3.3	37,910	2,162	991	30.2	1,137	55.3	5,039	97	105.1
	1946	8,515	25,067	33,582	3.8	37,812	2,095	947	30.2	1,074	53.8	4,788	99	98.0
	Denver & R. G. Wn.* 1947	6,339	8,794	15,133	4.1	34,503	2,098	990	30.6	1,033	44.7	6,520	168	91.2
	1946	6,705	8,463	15,168	4.8	31,837	1,959	919	30.3	933	42.6	5,711	172	90.6
	Southern Pacific Company 1947	22,009	42,510	64,519	2.9	40,933	2,708	1,121	27.3	1,308	69.8	10,242	101	111.6
	1946	22,553	50,518	73,071	2.5	38,659	2,601	1,096	27.7	1,152	59.7	10,296	105	110.4
	Union Pacific 1947	21,682	39,483	61,165	2.3	52,032	2,618	1,132	28.8	1,786	92.7	11,644	123	142.7
	1946	22,248	45,083	67,331	2.8	48,777	2,458	986	26.6	1,481	86.1	10,056	126	131.8
	Western Pacific 1947	2,068	3,406	5,474	3.4	54,762	2,805	1,325	28.6	2,189	96.2	10,170	65	88.7
	1946	2,358	4,182	6,540	10.7	49,185	2,703	1,222	28.4	1,827	86.8	9,813	68	90.7
Southwestern Region	International Great Northern* 1947	364	6,637	7,001	1.3	32,949	1,777	865	31.3	963	43.0	6,085	100	103.2
	1946	262	5,892	6,154	1.5	30,815	1,685	776	30.6	843	38.5	4,789	102	99.0
	Kansas City Southern 1947	956	5,801	6,757	4.7	58,964	3,052	1,440	32.0	1,381	64.6	10,859	101	118.2
	1946	1,010	5,383	6,393	4.0	43,964	2,639	1,245	32.0	1,262	58.5	9,708	105	124.6
	Mo.-Kans.-Texas Lines 1947	1,252	8,692	9,944	1.0	37,216	1,991	869	28.4	1,430	76.8	4,594	93	121.8
	1946	1,616	8,060	9,676	1.0	35,222	1,888	837	28.6	1,308	67.4	4,112	79	106.1
	Missouri Pacific* 1947	14,568	22,652	37,220	2.0	39,973	2,236	1,037	30.8	1,363	63.9	7,525	105	118.8
	1946	15,838	28,242	44,080	1.5	39,071	2,196	1,009	30.4	1,031	48.8	6,518	106	103.5
	Texas & Pacific 1947	844	9,502	10,346	2.3	41,755	2,326	1,005	29.9	1,568	82.2	8,778	88	138.3
	1946	1,027	6,840	7,867	1.7	44,070	2,152	899	27.6	1,288	70.4	5,514	85	81.5
	St. Louis-San Francisco 1947	3,968	16,787	20,755	2.2	33,959	1,752	780	30.6	1,184	59.1	5,211	120	102.9
	1946	4,266	13,929	18,195	2.1	32,426	1,600	736	30.4	1,196	56.7	4,870	125	100.8
	St. Louis Southw. Lines 1947	1,026	5,745	6,771	1.2	44,236	2,339	1,046	27.0	1,806	88.9	7,855	76	123.3
	1946	1,120	5,390	6,510	3.7	45,561	2,350	1,051	25.9	1,753	83.9	7,324	77	88.1
	Texas & New Orleans 1947	2,783	15,412	18,195	3.1	35,046	1,794	809	28.9	1,292	62.6	5,614	85	128.6
	1946	3,318	15,828	19,146	3.8	32,903	1,740	802	29.2	1,241	57.8	5,593	87	123.9

* Report of trustee or trustees.

Current Publications

Books

The Saga of the 708 Railway Grand Division, by A. G. Gregory. 73 pages, illustrations and maps. Published by the Baltimore & Ohio Railroad Co., Baltimore 1, Md.

This is the history of the B. & O.-sponsored Railway Grand Division. In his foreword Major Gregory says: "It is a story for the kin and the friends of every man who served with us. It is a story for the 28 different American railroads that schooled members of the organization in civilian life before the war began." He outlines the organization of the 708th, and describes its service in France, Belgium and Germany. Photographs of many staff members are included as well as maps and illustrations of the territories covered by the division. A roster of all personnel who served in the 708th headquarters is also included.

The Story of American Railroads, by Stewart H. Holbrook. 468 pages, illustrations. Published by Crown Publishers, 419 Fourth ave., New York 16. Price $4.50.

This volume is filled with interesting railroad history. It is the story of the building of our railroad empire and the men who have made it great. Small railroads and large ones are discussed, and there are chapters, in addition, on the sleeping car, standard time, the railroad in the drama, and ballads of the rails, to mention only a few. The book is well-illustrated, the photographs being grouped in three sections rather than spread throughout the book. A five-page bibliography is included.

The United States Railway Mission in Mexico, 1942-1946, by Fred E. Linder. 119 pages, illustrations. Published by the Institute of Inter-American Transportation, 499 Pennsylvania ave., Washington 25, D. C.

This report summarizes the work of the United States Railway Mission in Mexico. It tells of the engineering and transportation studies and investigations that were made of rail transportation conditions in Mexico immediately after Pearl Harbor, and describes the program, performance and accomplishments of the mission from the date of its organization until its termination on June 30, 1946.

Pamphlets

Transportation Facilities in Turkey, by Seymour T. R. Abt, Elisha E. Early and Kenneth N. Hynes. 5 pages. Issued by the Office of International Trade, United States Department of Commerce. Available from the Government Printing Office, Washington 25, D. C. Price, five cents.

Brief reports on the railway, highway, airline, shipping and port facilities of Turkey are noted in this pamphlet. Under the railroad section are included data on mileage and routes, history, equipment and rates.